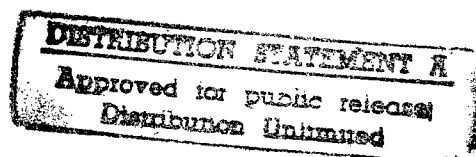


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14 February 1986

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AGRICULTURE

INTERNATIONAL AFFAIRS

GDR STRESSES BENEFITS OF INCREASED CEMA CROP SPECIALIZATION

East Berlin WIRTSCHAFTSWISSENSCHAFT in German Vol 33 No 8, Aug 85 pp 1160-70

[Article by Ulrich Thiede, Prof Dr of Economics, Certified Economist, Deputy Director of the Institute for Economy and Politics of Socialist Countries, Academy of Social Sciences, CC SED. Original title: "Theoretical Aspects of the Impact of Socialist Economic Integration on Intensively Expanded Reproduction in Agriculture"]

[Text] In the declaration of the main direction of the further development and intensification of the economic and scientific-technical cooperation of the member countries of the CEMA is oriented on the more complete utilization of the priorities of the socialist economic integration for the intensification of the common production. (Footnote 1) (Cf. "Declaration of the main directions of the further development and intensification of the economic and scientific-technical cooperation of the member nations of the CEMA" in "Advisory Council of the CEMA at the Highest Level, June 12-14, 1984, in Moscow" p 19. Verlag Die Wirtschaft, East Berlin.) "The leading representatives of the brother parties and the governments concentrated their attention on the solution of the tasks that developed from the changes in the internal and external conditions occurring recently" and set the goal "to raise the mutual cooperation to a new stage." (Footnote 2) (Ebenda) This assignment applies not only to the economies on the whole but also to their branches and areas - especially also to agriculture.

Even in this area of economics fundamental changes recently in the conditions of reproduction took place. Above all, the following are included:

- Comprehensive transition to the socialistic mass production, particularly in the form of mechanized mass production and the application of industrial production methods on the road to specialization and cooperation in production;
- Increasing application and utilization of new data from science and technology, particularly with the mechanization, the chemicalization, the soil enrichment, and the cultivation;
- Relatively rapid growth of the production stock with the expansion of the material-technical basis of socialism in agriculture;
- Effects of the rising costs and reduced stocks of raw materials and fuels on the development of agriculture;

- Requirements for an accelerated rise in agrarian production for covering growing demand for foodstuffs from domestic production;
- Consequences of the exhaustion of the extensive sources of growth among the individual economies of the member nations of the CEMA on the development of agriculture;
- Intensification of the classic struggle between socialism and imperialism, particularly by the boycott and embargo politics effected by USA imperialism against the USSR, the GDR, and the other member nations of the CEMA.

In consideration of these changes in the reproduction conditions agriculture in each of the CEMA member nations is presented with the task of increasing the production of foods in the interest of the further improvement of the supplies for the populace. The production is to be increased in such a manner that the populace can be fully supplied from domestic production. The newest decisions of brother parties, particularly also the food program of the CPSU, define the measures necessary for this. They assign the obligation in the majority of the European member nations of the CEMA to agriculture to intensify with acceleration the production and to complete the transfer to a comprehensive intensification. This new quality of the intensification of agricultural production, which is oriented toward the comprehensive rise in production and its efficiency, above all is characterized by the accelerated and thorough utilization of the newest knowledge from science and technology and the increase brought about by it in yield and performance with a simultaneous reduction in the specific and also partially the absolute production need. The transition to the comprehensive intensification is an important basis to provide that agriculture can fulfill with ever greater efficacy its functions in the economic reproduction process such as supplying the populace with foodstuffs and industry with raw materials, benefitting the national income, productive consumption of products and capacities of industry and other sectors, and the carrying out of national cultural measures.

The economically necessary transition to the intensively expanded reproduction also presents agriculture with the mandate of higher agrarian production with increasing efficiency, with a significantly smaller increase in production consumption to be achieved so that in this area of the economy too the working time, funding, and resource economizing reproduction can be attained in stages corresponding to the differentiated conditions of the individual member nations of the CEMA. For this reason the representatives of the CEMA member nations at their economics conference in Moscow in the interest of filling the demand for foodstuffs from the production of the community considered and decided on the intensification of agricultural production and the cooperation in this area as a priority endeavor, to strengthen their efforts toward the increase in production of foodstuffs and their efficacy, and to carry out corresponding common measures for the development and completion of the materials-technical basis and the introduction of progressive technologies. (Footnote 3) (Cf. ebenda) At the core of it in agriculture too the comprehensive intensification must be carried out. This intensification was proven to be in all European member nations also the main pathway to the increase in agricultural production and its efficiency. In the majority of the countries the mandate was given to initiate and to complete the transition to the resource economical type of

intensively expanded reproduction in order to improve in the case of further increase in production the ratio of investment to yield. This mandate is in full accord with the economical requirements of the CEMA countries.

For the increase in the agricultural production and for the rise in its supply efficiency in the CEMA countries--along with the release of the internal reserves in this sector--on the one hand, qualitative changes must be completed on a materials-technical basis and, on the other hand, production funding must be expanded as well as additional capacities created. Above all, in those countries such as the USSR, Bulgaria, and Romania, the transition to mainly intensively expanded reproduction on the basis of the degree of intensification reached so far, particularly the equipment using modern technology, of the cultivation progress achieved and the supply of inorganic fertilizer and other production materials as well as on the basis of the effects of some objective production conditions: the great and varied requirements for the mechanization, the "chemicalization," the irrigation and drainage determine the infrastructure, the transportation investment, and such, is still connected with a definite rise in the applied funding. There are corresponding mandates in the five-year plans of these countries. (Footnote 4) (For example, in the Soviet Union by 1990 the production funding for agriculture and food industry should be raised by 50 percent, the energy supply for agriculture by 60 percent, and the production of inorganic fertilizers by 70 percent.)

In the interest of the further increase in plant production the CEMA countries took on the task of carrying out measures intended to increase soil fertility and to improve field cultivation. In this case, an important role is played by the increased application of modern land technology in protecting the structure and promoting soil fertility, of fertilizers and pesticides, more productive species and hybrids, as well as complex measures for soil enrichment, from irrigation and drainage to the reduction of wind and water erosion.

Above all, in the interest of an increase in production of animals comprehensive measures for the expansion and modernization of stable capacities and for the improvement of the keeping, caring, and control of animal stocks must be realized. And in the area of the foodstuffs economy, it is necessary to improve or modernize, respectively, the transportation, storage, preservation, and processing capacities.

With this, it becomes clear that, with growing intensification as a trend even in the future, an increase in the applications per hectare is necessary in order effectively to use the main means of production in agriculture, the soil, to recycle energy withdrawn from it through the plant production, to raise its fertility, to limit the damage to the soil from the pressure of farm machinery, from wind erosion, and from water erosion, to reconstruct and to modernize production installations and buildings, and to close the gaps in technology still existing. All of this is necessary in order fully to achieve scientific-technical progress. In this case, indeed, the necessary use of funding must be undertaken in such a manner that the yields and productivity rise more rapidly than the investment of funding and resources, that the growth of production and work productivity permanently exceeds the growth of the objective prerequisites of production. The extent of the intensification of agriculture resides therein during the 1980's. Despite differing starting conditions or varying degrees of intensification, respectively, this task stands before all the European members of CEMA. This depends above all upon the main production means of agriculture, the soil, corresponding to the

different conditions, being used more intensively through dedicated measures and obtaining higher yields per unit of area with a simultaneous drop in the investment per unit of product. In the GDR the intensification measures are realized in such a manner that the rise in production proceeds as follows:

- With a drop in product consumption so that the agricultural net product rises faster than the gross product,
- With the additional increase in work productivity through a decrease in investment in objective and active labor,
- With a clear restriction of the growth of the fundamental funding per unit of net product.

Indeed, even in the other European members of the CEMA, intensification measures corresponding to their particular conditions are being carried out.

The transition of agriculture to intensively expanded reproduction fits into the wholly economical process for the intensification of production, which, on the basis of the state of development of the productive forces and socialistic production relationships, comprises all sectors and areas and corresponds to the requirements of the economic laws of socialism. We are dealing here with the beginning of an historic process of the evolution of a qualitatively new type of reproduction, that is adequate for the economics of the developing socialism and the requirements of the scientific-technical revolution. Under the conditions of the form with regard to the perfection of the developed socialistic community the necessary economic growth must be achieved on the basis of the state of development of the economies, above all through the increase of efficiency in production and the rise in labor productivity. In agriculture the production per unit of surface must be increased significantly with a simultaneous drop in the investment in production.

The agricultural results obtained in 1984 in the GDR confirm the correctness of this path. In plant production, over 30 million tons of grain units that so far brought in the largest yields and reached 48.5 dt grain units per hectare. Also in the case of grain (45 dt/ha), potatoes (239 dt/ha), fodder (432 dt/ha), as well as meadows and pastures (310 dt/ha or 327 dt/ha, respectively) record yields were reported. In animal husbandry the goals of the economic plan were exceeded in all items, and in contrast to last year, beef cattle production rose to 106.7 percent, the milk production to 106.2 percent, and the production of wool to 119.8 percent. This increase in yield and performance was accompanied by simultaneous improvement in the ratio of investment to yield. The growth in performance was achieved in plant production in comparison with last year with about 10 percent less nitrogen fertilizer per unit of plant products and the animal husbandry with about 4 percent less fodder per unit of animal products. At the same time the specific consumption of energy could be reduced significantly. (Footnote 5) (Cf. "Communication of the Central State Bureau for Statistics of the Carrying Out of the Economic Plan for 1984." NEUES DEUTSCHLAND of January 19-20, p 5)

This rise in efficiency in agriculture is a result of the intensification of production in which case more and more qualitative growth factors came into action and which were provided by the measures for the improvement of the management and planning and economic accounting, for the deepening of the cooperation relationships between the LPG (agricultural producer cooperative) and the VEG (state farm) for the plant and animal production as well as by the agrarian price reform.

Higher Requirements for the Intensification in the Coming Years

All the measures for the rise in productive capacity of the soil are in the foreground, because it is the source of crop cultivation, the basis for total agrarian production. The soil used for agriculture is an irreplaceable resource for the economic reproduction process. Its productivity can be increased significantly through intensification measures. As a biogenic source, its importance increases with regard to the further improvement of nutrition as well as to the filling of the raw materials demand. The increase in the productive capacity of the soil is an important economic growth factor in all of the CEMA countries.

Scientific-technical progress is of decisive importance in this case, progress which all measures for the increase in yield must accomplish, begun by measures for the improvement of soil fertility and field cultivation, of the use of cultivation advances and other knowledge from natural science such as molecular biology, genetic technology, biotechnology, the control of biological processes right to the application of modern technologies and processes. This is connected more and more to the increase in quality of soil cultivation, a sufficient supply for the soil of organic and inorganic fertilizers, adherence to agrotechnical schedules, the application of scientific crop rotation, correct species selection based upon the site, and good quality of sowing, cultivation, and harvesting. In many CEMA member nations these measures have already proved to be the most important and most effective way to achieve high yields in the fields and better results in the stables with a dropping investment per product unit. Further mechanization, chemicalization, soil enrichment and cultivation as well as the qualifying of the cooperative farmers and workers in agriculture will advance intensively the realization of this endeavor. These tasks must be realized in such a manner that the funding used for it is used more rationally in order "to produce with the same work effort more, with less work effort just as much or even more" (Footnote 6) (K. Marx. "The Want of Philosophy." K. Marx, F. Engels. "Works," Dietz Verlag, Berlin, 1956-1968. Vol 4, p 174.) corresponding to the teachings of the economic law of the time and is thus on the whole made more effective.

The new quality of the comprehensive intensification of agricultural production accordingly consists of the amplification of the effectiveness of all the resources utilized in such a manner that the production results grow faster than the investment needed for it in active and objective work. (Footnote 7) (Cf. also in this respect K. Groschoff, R. Heinrich, H. Wirsig. "Aspects of the further intensification of agriculture in view of the decisions of the 10th Party Congress of the SED." WIRTSCHAFTSWISSENSCHAFT, Issue 11, p 1297, 1981.) This in turn requires:

- Acceleration of scientific-technical progress that must penetrate all areas;
- More rapid increase in soil fertility and the productive capacity of animal husbandry;
- Transition to an economical type of intensively expanded reproduction, above all through the specific and partial but also absolute drop in the production consumption;
- Increase in efficiency of the basic investment, such as production buildings and installations, but also such production means as tractors, machines, fuel, seed corn and seedlings, fertilizers, herbicides, fodder, whereby the growth rates of the basic investment and the basic investment provision can rise more slowly than the growth of the net production and the labor productivity.

In this case various conditions and requirements conflict; on the one hand certain requirements of the intensification such as those of the further production rise, the mechanism for the elimination of even heavier physical labor, the necessary substitution of active work by objective work as well as the closing of existing gaps in mechanization increasing the investment value; on the other hand, production must be economical. It is imperative that economical processes in the reproduction process be predominant. Even for agriculture, the mandate formulated by Erich Honecker during the 10th Congress applies: "The Economic growth is to be guaranteed through the comprehensive intensification over a period of time. This requires setting the goals high for the rise in labor productivity, requires the reduction further of the specific production consumption." (Footnote 8) (10th Congress of the Central Committee of the SED, "From the speech of Comrade Erich Honecker." Dietz Verlag, Berlin, 1985, p 30) For the majority of the European CEMA member nations these new requirements for the intensification of agricultural production, a.i., are provided by the fact that the usable agricultural ground cannot be or cannot significantly be expanded, the extent of the supplies of industrially produced agricultural production means to a certain extent is becoming more and more limited; and, with regard to the utilization of the production means for agriculture, large reserves are available. This means accordingly that the measures necessary for the further intensification of agricultural production with the further improvement of mechanization, chemicalization, irrigation and drainage, as well as the increase in productivity of the plant species and the animal strains are closely connected with

- Better utilization of the newest scientific knowledge in the natural scientific, technological, and economic area;
- Effective application of the means of production such as production buildings and installations, machinery, tractors, combines, fodder, fertilizers, and others;

- Rational application of labor forces as the most important condition for the increase in labor productivity;
- Comprehensive socialistic simplification of production, from the improvement of the work process to the automation of certain production processes;
- Rational application aimed at high productivity and efficiency of the available investment funds, in which case the funds for the simple reproduction of the fundamental funding must provide an increase in productivity and efficiency.

These measures are to be carried out as a unit. "Living labor and materials to be saved, available basic funding and investments are to be better utilized." (Footnote 9) ("Report from the Central Committee of the Socialist Unity Party of Germany during the 10th Party Congress of the SED." Reported by E. Honecker. Dietz Verlag, Berlin, 1981, p 55.) Only together with other intensification factors does this provide the required yields and lead to the increase in production and its efficiency. In agriculture, also in the future, growth in production must be connected to a significant increase in efficiency. This process is supported by the further improvement of the socialistic production conditions in the country, particularly through the development and the deepening of manifold cooperation relationships, with which the cooperatives, plants, and installations involved in the unified reproduction process of food production cooperate according to plan. Of great importance for the rise in production and its efficiency is also the further consolidation of the state operations and the cooperatives and their installations as well as better utilization of their potentials. The improvement of the management, planning, and economic accounting regarding the economic mechanism also brings about important effects in motivating an increase in production. Not for the last time the furtherance of the small producers working on a contractual basis provides the possibility of unlocking the reserves available in the CEMA member countries to an even greater extent for an increase in food production.

The use of these capabilities and factors ever more, in the interest of the further increase in agricultural production in European CEMA member nations, and through the power of the community, for the reliable supply of the populace with foodstuffs and of industry with agricultural raw materials, under the present international conditions, particularly in the class struggle with imperialism, is not only an immediate concern of each individual CEMA member nation, but a task for the CEMA community. It has been shown that, with the level of development of productive efforts which has been attained to date, through the use of the priorities of international labor apportionment, above all, it is more possible to achieve specialization and cooperation in production among the CEMA member nations.

Requirements for Further Deepening the Cooperation of the CEMA member nations in Agriculture

In the field of agriculture also in the 1980's, this involves the utilization of measures in international cooperation and socialistic economic integration

in CEMA even more consistently, with further intensification corresponding to the orientation of the combined program on the deepening and improvement of cooperation and development of socialistic economic integration. The combined program presents the CEMA member countries with the mandate: "On the basis of the deepening and improvement of the cooperation, the development of socialist economic integration and the most efficient use of existing economic and natural conditions throughout each country, the production of agriculture...is to be further intensified, scientific-technical developments are to be introduced, as are the useful effects of community productivity and labor productivity to be increased." (Footnote 10) ("Combined program for the further intensification and improvement of the cooperation and development of the socialist economic integration of the member nations of the CEMA." in "Documents of the CEMA. On the Intensification and Improvement of the Cooperation and Development of the Socialist Economic Integration." Staatsverlag der DDR, Berlin, 1971, p 100.)

Above all, the object is to increase domestic production of agricultural products in each country and to improve their efficiency by utilizing the priorities of international labor assignments in order to supply the populace better and better from domestic production.

As in all the other branches of the economy of the CEMA member nations - tastes toward the acceleration of scientific-technical progress are increasingly shifting to the center of attention. As was determined during the 37th CEMA Conference - the decisive influence on the intensification of agricultural production comes from these tasks. Reference is made above all in this connection to the cultivation of new plant species with greater yields and animal breeds with greater performance, to the knowledge of modern soil cultivation for the improvement of soil fertility, to the scientific-technical progress in field and plant cultivation, plant nourishment and physiology, animal husbandry, nourishment and the science of foodstuffs, to biotechnology, the modern methods of veterinary medicine, and to the economic sciences such as agro-economics and socialistic operating management. A special place value in this case is possessed by such tasks as the breeding improvement of the performance of farm animals, the development of new and more productive farm technology with a favorable mass to yield ratio, lesser energy consumption and pressures on the soil, the development and production of active pesticides and herbicides, veterinary preparations, and fodder additives, but also such new processes as the microbial production of albumen, the more rational utilization of primary energy, the working out of new fully mechanized and automated production lines. The utilization of the data from scientific-technical progress today is a decisive starting point for the increase in agricultural production and its efficiency, for thereby the yield or performance potential, respectively, of plant species and animal breeds are increased, the soil fruitfulness raised, the better use of productivity of the plants and animals provided, and decisively contributed to the drop in investment of living labor as well as materials. For this reason the acceleration of the scientific-technical progress belongs to the most important tasks of international cooperation. Today based upon the high degree of development of science and technology as well as the rapid changes in knowledge no country can be assured of the scientific-technical data and

performance necessary for the intensification of agriculture by themselves alone. This means only through a planned and guided scientific-technical cooperation within the CEMA is it possible.

The best way in this case was shown to be the more intensive cooperation in research, the transition from the coordination of research projects to the agreed, contracted joint research, to the setting up of temporary joint research collectives, and to the planned labor division and specialization between the research installations under the direction of the academies of agricultural sciences. Experience shows that lasting economic results are obtained wherever the union of the scientific-technical efforts of the CEMA countries precedes the cooperation in the area of production.

The production means manufactured industrially furthermore have great influence on the intensification of agricultural production. They are a decisive material prerequisite for the rise in production and labor productivity in agriculture. Accordingly, it is greatly useful to all the CEMA member nations when they intensify their cooperation even in this area. In past years it was found in practice that precisely in this manner it is possible to put the most economical technologies and processes into practice and thus to raise the efficiency of the production. "This form of cooperation rests upon the generally known rule that new technological processes above all can be used then with economic advantage when the production based upon these processes shows an optimum quantity or the production of products of technological equality reaches a sufficiently great number of pieces, respectively." (Footnote 11) (L. Konstandow. "USSR-GDR: 35 years of economic cooperation." EINHEIT Issue 9/10, p 794, 1984) Here we are not simply dealing with more technology but mainly with the development of those machines and installations that are suitable for differentiated requirements of the varying site and production conditions; this means uniform basic types with different adaptations and application variants. All of this serves the goal of raising agricultural production and simplifying the working procedures in the interest of increasing the labor productivity and lightening heavy manual labor. Here, cooperation may directly effect progress in the division of labor or in close cooperation, respectively, within the whole extent of the technology necessary for agriculture and foodstuffs production. Parallel projects splinter the research and development capacities and reduce the rate of technological development.

The priorities of international specialization and cooperation in the production of field machines, tractors, soil enrichment installations, animal husbandry installations, as well as the transportation and storage technologies should be used more than previously. For example, in this manner it would be practical for individual countries to concentrate on the assurance of a complete machine system or a complete type series of certain field machinery or tractors, respectively, of a performance class or rather a special line. Among other things good experience is obtained from the cooperation between the GDR and the USSR, which manufactures for the GDR the heavy duty tractors while the GDR produces for the USSR industrial installations for animal husbandry including dairy installations and poultry coops.

Great possibilities for cooperation still exist with the development and production of capable transportation and storage technology as well as modern processing machinery. Through the specialization and cooperation during the development and production of this technology the present losses occurring in this area can be reduced significantly and the supply efficiency of the products produced by agriculture significantly raised. That would be equal in importance to an increase in production.

A broad field for international specialization and cooperation is offered by the development and the production of herbicides and chemical products, that is of small tonnage chemical products for agriculture. Their number is very large and the necessary volume often so small that for all involved through the specialization in certain types a greater utilization would arise. Accordingly, it would be very useful for the intensification of agricultural production to improve further on the road already traveled by the international economic organization "Interchim" and to improve the material prerequisites necessary for it throughout the participating countries.

Also, the better utilization of the variable site and climatic conditions receives increasing significance for the increase in agricultural production. In agriculture they have a direct effect on the level of yields, for a peculiarity of agricultural production exists in the fact that it has its source not only in human labor but also in direct natural factors such as soil, water, and warmth. For this reason in agriculture human labor despite equal investment in objective labor is variably productive. This is already the case within individual countries, but as the result of the various climatic zones of the earth gains new dimensions through international cooperation. If these possibilities existed already in past years among the European CEMA member nations, then they have become even significantly greater recently through the entry of such countries as the Republic of Cuba and the Socialist Republic of Vietnam to CEMA. The utilization of these variable location and climatic conditions has become today an important productivity factor. Accordingly, not only the mutual exchange of goods should be reinforced into an expansion of the assortment; above all the possibilities of international specialization in production in selected areas should also be used more strongly. To these belong such cultures and fruit species, that have special requirements for the conditions of that location. These are as follows:

- A species of fruit that can in fact be planted in all the CEMA countries, but provide high yields only under certain climatic conditions. This applies, for example, to the multiplication of plant seeds in the case of small grain legumes and of a series of vegetable and flower species, for medicinal and spice plants, for corn, millet, paprika, peaches, wine grapes;
- Other species of fruit that cannot be planted in some countries for climatic reasons, such as, for example, rice, cotton, coffee, cacao, citrus fruits, sugar cane, tea, bananas.

In addition there is even the possibility of using varying plant growing seasons through the international specialization of the production in selected areas. The GDR practices that, for example, in the case of new potatoes and bell peppers with the Republic of Cuba and in the case of tomatoes, paprika, and other vegetable and fruit species with Hungary, Romania, and Bulgaria. The utilization of all of these possibilities will contribute to the increase in the total yield of foodstuffs in socialist community and assure a better continuous supply for the population.

An additional important area of the international division of labor and cooperation has recently developed in the foodstuffs economy. The requirements developed here are derived not only from the technical and technological advances of industry, but also from the requisites of the development of the uniform reproduction processes of agriculture and food commodity economy. At the center of the cooperation there are increasing measures for the utilization with little loss and effective in supplying of agricultural products through the development and introduction of new technologies and techniques for their storage, transportation, and processing.

Precisely in this area all the CEMA nations are facing major tasks, for through the introduction of progressive technologies and the development and improvement of the materials-technical basis of the foodstuffs or food industry, respectively, through the reduction of the losses occurring at this time a significantly greater portion of the products derived from agriculture can be used for supply purposes. Nevertheless, more than nine tenths of the products obtained from agriculture before their consumption must be finished or processed, stored, and transported.

Through the international specialization and cooperation the CEMA nations can also in the area of food commodity economy speed up the scientific-technical progress, improve techniques and technologies for the processing of agricultural raw materials to a higher scientific-technical level, and apply new processes for the production of qualitatively better foods with smaller use of raw materials lower production investment. That is of great importance for the intensively expanded reproduction of the complex of the foodstuffs production, for with these means the same supply results can be obtained as with the production increase in agriculture although with significantly lower investment.

In the further international cooperation accordingly consideration must be given more strongly than previously to the uniform reproduction process of the foodstuffs production, from the scientific-technical cooperation in production coordination for the increase in agricultural production to the cooperation in the improvement and modernization of the foodstuffs or food industry, respectively. All of this must proceed with the further improvement of the cooperation, that means particularly the agreement and coordination of the measures for cooperation, the planned completion of effective direct relationships between administrative units, the improvement of the system of economic stimulation as well as the working out and perfection of the copyrights, patents, and contractual rights.

Now it depends upon the important impulses emanating from the Advisory Council of the CEMA at the highest level in Moscow to be used also for the intensification of the cooperation in the area of agriculture and foodstuffs supply and thus to accelerate the intensification of the production of foodstuffs. That will contribute decisively to the improvement of the supply to the population of the CEMA countries from domestic production and to the guarantee of its stability.

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AGRICULTURE

GERMAN DEMOCRATIC REPUBLIC

CC SECRETARY FELFE CITES FACTORS FOR INCREASED FARM OUTPUT

East Berlin KOOPERATION in German Vol 19 No 12, Dec 85 pp 529-32

[Interview with Comrade Werner Felte, member of the Politburo and secretary of the SED Central Committee, on questions of socialist business management, by the journal KOOPERATION; date and place not specified: "To Further Develop and Stabilize the Level of Output and Performance, and to Continue to Improve Work Effectiveness Through Comprehensive Intensification"]

[Text] Question As all other workers, the cooperative farmers and workers of socialist agriculture are successfully preparing the 11th SED Party Congress. This was pointed out at the 11th session of the SED Central Committee.

[Answer] Although the year 1985 is not yet concluded, one can already say: for socialist agriculture, it was the most successful year so far. The super result in plant production of the previous year was not only repeated, but surpassed. A new record was set in grain production with 46 quintals per hectare, and a total yield of 11.6 million tons. The growth in animal production is also noteworthy. With that, the farmers and workers of cooperatives in socialist competition made a significant contribution to the major task in honor of the 11th SED Party Congress and made good their promise to the Party.

This was given great recognition by Comrade Erich Honecker, secretary general of the SED Central Committee and chairman of the State Council, at the meeting in Potsdam on the occasion of the 40th anniversary of democratic land reform.

Considering developments since the 10th Party Congress, a number of qualitative changes are particularly noteworthy and of economic importance. I should like to stress above all that, for the first time since the founding of the GDR, we succeeded in developing plant production faster than animal production--and this at a high overall growth rate of production. Expensive grain imports were replaced, and the degree of self-sufficiency with domestically produced foodstuffs was further increased.

We also succeeded in recent years in increasing production faster than production consumption. We produced more effectively. It is also

significant that animal production for slaughter was raised to a larger extent than before due to the performance increase per animal. Economy demands that we organize production in this way in the future, also.

All these results demonstrate that the farmers and workers of cooperatives cope successfully with the new demands. They are the expression of hard and creative work and reflect the successful implementation of our party's economic strategy in agriculture, also.

Our course of strengthening LPGs and VEGs specializing in plant and animal production through deepening cooperation is welcomed and actively implemented by the farmers and workers of the cooperatives. Essential for the performance growth was operational organization on the basis of the territorial principle which ensures a broad-based involvement of people in production planning and management and, because of the high level of qualification, makes it possible to apply comprehensively new discoveries of science.

Important reasons for our dynamic development in agriculture were:

- central planning and ever more comprehensive inclusion of cooperative farmers and workers in the complex process of intensification;
- further deepening of cooperation between plant and animal production, and between state and cooperative property;
- broad implementation of the latest scientific and technical developments in close conjunction with farm experience, particularly in the concepts of highest yields and highest performance;
- raising the quality of management at all levels, and that of individual work processes in field and stable;
- economic thinking and acting promoted by agricultural price reform;
- ever improving implementation of the socialist performance principle in the LPGs and VEGs of plant and animal production, their departments and brigades;
- the steadfast battle to overcome unjustified differences in production;
- the close linking of LPGs and VEGs with their villages, and improved working and living conditions which express the unity of economic and social policy;
- individual production, skillfully integrated as a meaningful complement to society's production.

To reduce it to a common denominator: the agricultural policy of the 10th SED Party Congress is proving itself in real life.

[Question] Your statement shows that in socialist agriculture, also, the turn toward comprehensive intensification was initiated successfully. What is needed to give permanence to this positive development?

[Answer] At present, the cooperative farmers and workers in the LPGs and VEGs are working intensively on preparation of the 1986 plan. In short, the demanding task consists in creating all the preconditions for stabilizing and developing further that which has been achieved.

Agriculture is expected to supply the growing demand for foodstuffs and raw materials from its own sources, and with continuing lower specific expenditure. This requires continued acceleration of scientific-technical progress. The entire agricultural reproduction process must be penetrated by science and economy, and appropriate tasks must be derived therefrom. In the future, the criteria of comprehensive intensification can be accommodated only in that manner. It is especially a matter of a higher growth rate of self-produced agricultural products vis-a-vis gross turnover, a faster growth of the net product versus gross product, and greater speed in increasing work productivity compared to the development of gross turnover. This way, through performance growth, we create the prerequisites for ensuring social progress as planned.

These economic criteria make concrete demands on business administration. It is the task of socialist business administration to ensure in concrete terms on the operational level the accordance which exists objectively between national economic interests and those of the farmers and workers of cooperatives. The potential of the two forms of ownership, the use and development of creativity and initiative depend on the manner in which this work is carried out.

[Question] The SED bases its decisions on the stability of the LPGs and VEGs, on the stamp of its juridic independence and economic autonomy, as the decisive condition of continued intensification of agricultural production. Thus socialist business administration occupies a key position in implementing economic strategy in this sector of the national economy. What qualitatively new demands are derived from that for socialist business administration?

[Answer] We proceed from the premise that the LPGs and VEGs of plant and animal production constitute the basic units of agricultural production, and will continue as such. They offer great leeway for the development of productive forces through cooperation.

Comprehensive and permanent intensification demands making determined use of scientific-technical progress and the initiative and creativity of the collectives to increase productivity and effectiveness. They are the two inexhaustible mainsprings of performance growth on which socialist business administration should primarily concentrate. While implementing national economic tasks, it must always provide direction and goals for the conscious activity of the collectives in the LPGs and VEGs.

While observing the special characteristics existing in agriculture, it establishes the conditions of use and effectiveness of economic rules. The production and effectiveness level of an enterprise indicate the expertise with which the collectives in the LPGs and VEGs apply and utilize these objective rules.

In the agricultural reproduction process the effect of economic rules is closely intertwined with the effect of natural laws and the utilization of natural forces.

New possibilities have been opened up to press the free forces of nature into the service of man in a new way through the progressing scientific-technical revolution, above all through development of key technologies such as microelectronics, modern computation technology based thereon, automated production preparation, and biotechnology applied to deliberate control of biological processes. This also opens up a broad field of activity for our socialist youth organization.

All this leads to changing conditions of effectiveness and use of economic rules in the agricultural reproduction process. Among other things, it concerns questions of importance for intensification, such as the level of soil fertility; conditions for using the soil's crop capacity; the animals' performance potential; organizational and cooperative forms of production, work and management; development of the enterprise's work capacity; performance stimulation; implementing working and living conditions.

Important prerequisites are stable work collectives in all areas of production, a coordinated and effective system of management, planning and economic accounting, and effective cooperation of state and enterprise management on the basis of democratic centralism.

It is our task now to adapt theory and practice to these new and higher demands on socialist business administration as derived from the acceleration and binding use of scientific-technical progress and the growing initiative of cooperative farmers and workers. We expect of the scientists active in this field that they, based on the latest scientific knowledge in the areas of sociology and natural sciences, will delve more deeply into the theory of the efficacy of economic rules in the LPGs and VEGs of plant and animal production and will guide the interest of cooperative farmers and workers more strongly toward an increase in production and effectiveness.

It is imperative that scientists of business management continue to work on solutions to effectively shape the operations and work organization at the various locations in the GDR, and to produce more scientific preliminary work in their field.

The practice of business administration must be concerned with applying more quickly the latest scientific findings and best results, and with greater commitment.

[Question] The program of the SED calls the deepening of cooperation a characteristic of its agricultural policy. For several years now, its decisions are aimed at transferring managerial functions to the co-operation councils. Which questions are of major importance in this case?

[Answer] At all stages of our development, cooperation has contributed essentially to the continual increase in productivity and effectiveness in the LPGs and VEGs. Due to the system of division of labor in the uniform

reproduction process between specialized plant and animal production enterprises, more than ever, cooperation has become an objective condition of existence and development of cooperative ownership.

The power potential of cooperation of which Marx spoke will only be set free, however, if we handle it well managerially at every stage. At present, this is being done through transferral of managerial functions to the cooperation councils through the LPGs and VEGs. They are functions derived from the reproduction process of the LPGs and VEGs of plant and animal production within the cooperation, uniform but organized on the basis of division of labor. They cannot be carried out in isolation from each other and are of a business administration type by their nature.

To the extent that cooperation councils cope ever better with their functions of management, planning, organization and accounting of the interplay of the partners, the LPGs and VEGs of plant and animal production can carry out their economic and social tasks with greater self-responsibility. It must be the concern of business administration to focus even more concretely on the shaping of these functions in the cooperation councils. Emphasis must be put on coordinated application of scientific-technical progress, further steps to overcome unjustified differences, and securing the basic proportions of the uniform reproduction process. The question of proportionality cannot always be solved within the framework of a cooperation. This also imposes qualitative demands on the RLNs and state managerial activity.

Special responsibility is placed on the basic organizations of our party in the LPGs and VEGs of plant and animal production and on the councils of the party secretaries in the cooperations. The ideological attitude and joint responsibility of cooperative farmers and workers for the uniform reproduction process are influenced decisively by the convincing political work of the communists, thus promoting their initiatives for a further increase in performance and effectiveness. Firm battle positions of the party organizations are also the basic precondition for effective implementation of socialist business administration.

Overall, cooperations whose cooperation councils assume managerial functions can make concentrated use of the higher education potential, particularly that of university and trade school cadres, strengthen the broader effect of scientific-technical progress, make full use of modern data-processing technology and, through joint funds, provide needed means faster. Simultaneously, cooperation power also increases the possibilities of improving housing and living conditions in the villages and developing cultural and intellectual life. Continued cooperation between community representatives, FDJ, VdgB, VKSK, LPGs and VEGs is also bearing fruit.

[Question] The managerial activity of the cooperation councils create essential preconditions for a high standard of business administration activity in the LPGs and VEGs. To which major points would you like to direct the attention of cooperative farmers and workers in preparing the 11th SED Party Congress?

[Answer] We follow with great interest everything that is done in practice in order to combine science and production more effectively. We are all agreed that at the present level of yield and performance, greater growth rates can be achieved only by increasing the quality of management and work everywhere. This requires above all that scientific findings be made more production effective than up to now. This is basically true for every field and every stable, for every plant and animal type.

In this regard, we possess a very effective instrument in working with the concept of highest yield and highest performance according to each field and stable. I should like to stress that we are succeeding increasingly in involving cooperative farmers and workers in drafting, specifying and implementing these concepts and releasing their creative initiatives. But we also know that we do not utilize all these possibilities nearly enough.

It is a fact that the LPGs and VEGs of plant and animal production with the highest yield and performance distinguish themselves from other enterprises with comparable conditions because they organize and manage production and work with a better scientific approach. The boards of directors and management of these enterprises deliberately arouse the interest of cooperative farmers and workers in applying the latest scientific knowhow. Naturally, this is also stimulated appropriately. Such LPGs and VEGs have informative documents on the level of soil fertility of every field, and all possibilities are used in order to raise its specific level in every section.

It is characteristic of such top enterprises that the managers, together with commissions and groups of specialists, observe closely the progress in scientific findings for every plant and animal type and include all that is suitable for their conditions in the concept of highest yield and performance as relating to field and stable. These concepts are defended before the collectives. It is also a form of continuing on-the-job training.

In implementing those concepts, keeping inventory and control has proven useful in these enterprises. By involving the cooperative farmers and workers doing the actual work, the managers in charge collect all information on soil condition, stock development, weed growth, etc., in order to derive appropriate measures for soil care and treatment, fertilizing, and plant protection. Analogous measures are used in the supervision of animal stock. Thus all expenditures are carried out purposefully. It leads to higher yields at lower specific expenditure and promotes fund-saving intensification. It is self-evident that in such enterprises the work collectives are responsible for the funds and production. They know their tasks precisely; they are assigned in the brigade plan. The amount of their remuneration and premiums depends, in addition to work performance, on the production results achieved and on the expenditures used. Such concepts should be considered by all LPGs and VEGs of plant and animal production.

Step by step, we must develop solutions for directing competition and stimulating performance adapted to the operational and work organization. Continued on-the-job training for cooperative farmers and workers must also be promoted with greater purpose.

Last but not least, I also would like to draw the attention of business administration scientists to the goal that, due to the permanent nature of individual production, their relations with social production should be even better developed in a business administration sense.

At present, all the LPGs are preparing their annual general meetings. In a great number of cooperatives decisions are made at these meetings regarding the assumption of managerial functions by the cooperation councils. During this phase of evaluation, analysis and business reporting it must be made possible, measured against rising demands, to uncover one's own reserves and potential and to work out ways of achieving a higher level of economic activity. All cooperative farmers and workers must be drawn into this process of creative work from its very inception. The brigade meetings should play the part of a true school, of a constructive exchange of experience for continuing intensification of a new quality. Hereby we create the proper atmosphere for socialist competition in the immediate preparation of the 11th SED Party Congress.

In conclusion I should like to say that the magazine KOOPERATION should provide effective aid in disseminating new knowledge by carrying out a broad scientific-creative exchange of experiences on the problems of socialist business administration.

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AGRICULTURE

ROMANIA

CULTIVATION, UTILIZATION OF TRITICALE GRAIN CROPS

Bucharest CEREALE SI PLANTE TEHNICE in Romanian No 9, Sep 85 pp 24-28

[Article by G. Ittu, M. Verzea, N. Saulescu, Institute of Cereal and Industrial Crop Research, Fundulea: "Elements of Triticale Cultivation Technology "]

[Text] In accordance with the instructions of Comrade Nicolae Ceausescu, secretary general of the Romanian Communist Party, the assortment of grain crops has been enlarged on many farms in Romania in recent years by addition of a new species, triticale.

Created by man more than 100 years ago by combining the genetic heritage of wheat and rye, only in the last decade has large-scale farm production of this species begun, along with the progress made in creation of new varieties. It is now grown over a total area of about 500,000 hectares throughout the world, especially in countries such as the USSR, the United States, the Chinese People's Republic, Canada, Argentina, etc.

In Romania, systematic research connected with testing and improvement of triticale varieties began in 1972. This created the preconditions for introduction of this species into Romanian agriculture as well.

Useful findings concerning the technology of growing this species can be advanced on the basis of the results obtained in research and the experience acquired in production units.

1. Crop Zoning and Location

Triticale inherited from rye an ability to tolerate soil acidity better than wheat and barley. Hence triticale cultivation has better prospects for succeeding than wheat or barley primarily in acid soil (with a pH value lower than 5.5 to 6), where the growth of the root system of these crops is stunted, something which prevents full manifestation of their production potential.

On the other hand, triticale, like rye, tolerates sandy soil better. But in view of the moisture deficiency and the higher temperatures in the areas in which sandy soils are present, good results can be obtained in such zones only with the earlier varieties of triticale.

Currently grown triticale crops have on the average yielded the greatest increases in grain production relative to wheat in the podzolic soils of the hill country with a damper and cooler climate, in Transylvania, the North-western part of the country, Northern Muntenia and Oltenia, and Northern Moldavia.

Triticale should be grown primarily on soil where rye has generally yielded better results than wheat. Floodlands or land with a chronic excess of moisture should be avoided; triticale can be heavily affected because of the more rapid rate of growth in spring.

Inasmuch as the triticale sowing period falls 3 to 5 days earlier than that of wheat, the precursor crops selected should be ones which permit sowing during the optimum period. The current varieties of triticale are sensitive to fusarial wilt, so that the crops should not follow grain or corn crops which have been severely attacked.

2. Crop Fertilization

Triticale is more vigorous and has a better developed root system than other cereals; this enables it to make better use of soils with a lower natural fertility potential. High yields cannot be obtained, however, unless suitable nutrients are provided.

On the other hand, the current triticale varieties are taller and less resistant to lodging than the current varieties of wheat. Consequently, excessive administration of nitrogen nutrients can easily lead to harvest losses. Hence balanced and moderate fertilization is recommended, with a dose ranging from 40 to 90 kilograms per hectare of P2O5, depending on the phosphorus content of the soil, and 60 to 100 kilograms per hectare of nitrogen, depending on the precursor crop and the humus content of the soil. It is recommended that nitrogen fertilizers be applied in installments, about one third in autumn and two thirds in spring.

3. Cultivated Varieties

Although it is a new species which has undergone relatively little improvement, triticale is currently characterized by wide genetic variability from one variety to another, with the result that by now one can no longer speak of general species characteristics, but of characteristics of varieties.

Among the experimental varieties thus far tested, the best results have been yielded by the Romanian variety TF 2 officially approved in 1985.

The TF 2 variety has a high tillering capacity and grows rapidly in spring. The height of the plant is 110 to 120 centimeters. The ear is large, bearded, white, and drooping at maturity. The grain is light red, large, eggshaped, and has tegumental surface roughnesses and MMB of 44 to 50 grams and MH of 65 to 68 kilograms per hectoliter.

The frost resistance in artificial phytotron tests was found to be below average and the field wintering was average. Consequently, triticale is not

recommended for areas with harsh winters. It forms ears simultaneously with the early varieties of wheat but reaches maturity 3 to 4 days later than the intermediate varieties of wheat. It is sensitive to lodging and intense heat. It resists mildew, yellow rust, black rust, and *Septoria tritici* well, but is sensitive to *Septoria nodorum*, fusarial wilt of ears, and germination in the ear. It is just as tolerant as is rye of the aluminum toxicity characteristic of acid soils.

In testing for a period of 6 years at stations in the Academy of Agricultural and Forestry Sciences network, which is situated in areas with acid soils, it exhibited yield performance superior to that of the best varieties of officially approved wheat and rye. On sandy soil the grain yield with the TF 2 variety was on the average at the level of the the best wheat varieties or slightly higher than this level. Generally speaking, the TF 2 variety delivered better yields under conditions not favorable to wheat and lower yields under conditions of lodging, intense heat, or frequent rain during the second half of the seed filling period.

The Soviet variety AD 206 which, although taller and less productive than other varieties, resists wintering better, has been recommended along with the TF 2 for areas with harsh winters, and Northern Moldavia in particular.

The earlier triticale varieties grown in Bulgaria (AD 202, etc) have yielded good results in the Southern and Western parts of the country, but their cultivation entails risks because of their high sensitivity to frost.

Many other promising forms of triticale are now undergoing testing, among which mention should be made of the lines recently created at the Turda Agricultural Research Station and the Research Institute for Grains and Industrial Crops at Fundulea and the Polish Lasko variety. The most valuable of these varieties will be introduced into production in the near future.

4. Sowing

In view of the fact that the current varieties of triticale are more tolerant of virus diseases, they can be sown 3 to 5 days earlier than wheat, so that 500-650 degrees of heat can be accumulated before the coming of winter. Sowing too early must be avoided, especially with varieties characterized by lower wintering resistance, so as not to bring about sensitization of the plants to frost. On the other hand, the preliminary results suggest that triticale can tolerate better than wheat a delay of several days beyond the optimum period.

In view of the high germination capacity and the lower resistance to lodging, the amount of seed used should ensure 400 to 450 germinated seeds per square meter.

Particular attention must be paid to correct calculation of the sowing rate as a function seed germination, the value of which may be low in years with rainy weather at harvest time. Although the varieties of triticale are resistant to smut, it is recommended that the seed be treated with FB 7 (2.5

kilograms per ton) to prevent fusarial wilt and attack by wire worms and pea weevil.

5. Chemical Weed Control

The varieties of triticale are generally less tolerant than wheat to the phytotoxic effect resulting from incorrect administration of weed killers. Consequently, it is highly important to conform exactly to the doses and administration period of weed killers recommended for wheat.

6. Harvesting

A deficiency still inherent in all varieties of triticale is their sensitivity to germination in the ear in the event of repeated rainfall at maturity. Consequently, although the resistance to shaking is generally good, harvesting should be carried out without delay when the moisture content of the grains reaches 17 to 18 percent.

It is preferable to retain for sowing batches which have not been exposed to rainfall when ripe, and seed production should be concentrated to the greatest extent possible in areas in which rainfall is less frequent during this period.

Similarly, when batches are harvested for seeding, special attention must be paid to adjusting the combines to avoid bursting the grains, which are larger and more friable than wheat grains.

In the seed conditioning process, the equipment used should permit gravimetric selection to eliminate the greatest possible amount of wilted, germinated, or greatly stunted seeds.

7. Crop Utilization Methods

The experimental results obtained thus far and the experience of countries which have already introduced triticale cultivation over large areas show that this crop can be put to numerous uses, both grain production for bread baking, in the food industry as a concentrated feed, and for the production of green fodder or silage.

Tests conducted in the pilot stage show that if triticale flour is used to bake bread by application of the baking technology employed for wheat, the bread obtained is of inferior quality. When mixed with 50 to 70 percent wheat flour of good quality, triticale flour yields a good-quality bread similar to wheat bread.

Bread of suitable quality can be obtained from triticale flour by applying a modified technology typical of that employed in producing rye bread.

Expanded products, pastry products, etc are made from triticale grain in other countries.

Triticale can be successfully used as a concentrated feed in the feeding of hogs and poultry, since it has a lysine content higher than that of wheat (3.0 to 3.5 percent of the proteins on the average). The protein content of the grain falls within the same range as that of wheat (12 to 15 percent).

Utilization of triticale by harvesting during the milk-wax stage appears to be especially promising. It provides 35 to 40 tons of green fodder per hectare (10 to 15 tons of dry matter per hectare with 11 to 12 percent protein of good nutritive value. This feed can be used immediately or can be ensiled with good results.

Good results have also been obtained by using triticale harvested at the end of April as green fodder. Beyond this date the crop is regenerated in years with sufficient precipitation and can yield a harvest of silage or even of grain.

On the basis of the intensive research now in progress both to create new varieties of triticale and to improve the cultivation technology, this species will be able to make an ever greater contribution toward increase in the cereal production in Romania.

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ECONOMY

INTERNATIONAL AFFAIRS

OUTLOOK FOR CSSR-CEMA RELATIONS TO YEAR 2000

Prague HOSPODARSKE NOVINY in Czech No 43, 1985 pp 8-9

[Article by Dr Eng Frantisek Stransky, Research Institute for Foreign Economic Relations, Prague: "Realistic View as an Alternative, Adaptation as a Necessity"]

[Text] The preparation of the social and economic development plan for the upcoming 5-year plan and the formulation of the basic objectives of national economic strategy through the year 2000 are making it increasingly imperative to develop a realistic conception for the foreign economic relations of the CSSR, especially with regard to the CEMA member countries. This is the more pressing because, as stated at the 12th CPCZ Central Committee Plenum, ... "contemporary developments confirm...the need to accord priority to these relations," in addition to the fact that under the conditions of the Czechoslovak economy foreign economic relations must necessarily be called upon to assure the intensification of the capital replacement process. This article formulates certain basic alternatives for these relations.

In an overall strategy foreign economic relations represent one of the most important and at the same time most complex areas of attention. This is so for a number of reasons, among them the following:

- Foreign economic relations have an exclusively international political cast. For this reason their development, and their profile by region and materials cannot be simplified into a purely economic matter;
- Practically all basic economic problems of both the world economy and of individual countries are present in an intensified form in foreign economic relations;
- Foreign economic relations are less controllable than other parts of the capital replacement process. The development of the world economy is instead the dominant factor here, with its structural trends and periods of global and localized crises and booms, along with world price fluctuations. These relations therefore require foresight, as well as the large scale and sufficiently rapid adaptation of the national economy. This of course involves the risk of choosing the proper variant from available alternatives. In an

economy dependent to a relatively large degree on the foreign environment it becomes necessary therefore to work with all available resources (financial, material and capital resources).

Proper Valuation Essential

The necessity for developing a long range strategy for the evolution of the foreign economic relations of the CSSR stems mainly from the makeup of the Czechoslovak economy and its economic and scientific sophistication. Specifically, the need for such a strategy stems from the planned basis of the socialist economy, the existence of an economic community of CEMA countries, and Czechoslovakia's participation in it. If one starts by determining the extent, form and quality of the incorporation of the CSSR economy in the international division of labor, then one necessarily also concludes that to the extent that these characteristics are not borne out by the numbers (and these numbers in relation to each other) that foreign economic relations are not fulfilling their function. This is especially true in an intensive development mode.

Furthermore, if targets are not being met then conditions are not being developed for the necessary productivity of the economy, the optimal efficiency of capital assets or increases in labor productivity that come from increased specialization and the installation of foreign equipment, etc.

For these reasons it is particularly pressing to evaluate realistically the degree of incorporation of the Czechoslovak economy into the international division of labor, to project the future development of the foreign environment, and to establish future objectives for different time frames. Above all, the short term outlook should give priority to the rapid adaptation of the foreign relations of the CSSR to a new type of capital replacement. Such time-relative objectives are essential to provide the necessary scope, structure and quality of inputs to make the above process possible. These goals also serve as a strict yardstick of the actual development of this process, above all in terms of input efficiency and product success on world markets.

Intensification Considerations and Objectives

Discussions on the future development of the Czechoslovak economy have concluded, as was the case in other European CEMA countries, that it is essential to change the current mode of capital replacement, because the existing mode has exhausted its growth potential. Foreign economic relations must be involved in this process to a greater extent than before, with particular emphasis placed on cooperation within the framework of socialist economic integration.

The major aspects of these discussions that hold the promise of leading to a positive mastery of the above domestic and foreign conditions are represented by a set of selected, basic problems in Czechoslovakia and in other European CEMA countries.

Economic strategies follow basically the same direction, and are focused on some combination of the following five objectives.

1. Speeding up the growth of consumed national income. This indicator in the CSSR has shown minimal growth since the mid-1970's. It is essential to speed this up both in terms of material resources to improve economic incentives for increasing labor productivity and for capital investment directed at the upgrading of the capital stock and an increase in their production efficiency.

The seriousness of this problem is indicated by the fact that in 1976 formed national income in 1977 prices accounted for 39 percent of social product, while consumed national income accounted for 40 percent. The same indicators for 1983 are 38 percent and 34 percent respectively, although increases in national income in 1976-1983 accounted for only 7 percent of increases in social product during these years. The volume of consumed national income increased by 3.7 percent in 1976-1983, while the population grew by 3.3 percent. This trend was evident both in a dampening of investment growth (the volume of investment in 1983 was 6.4 percent higher than in 1976), and in the development of real wages which have not shown the requisite movement over this period.

2. A reduction in the excessively high intensity of production consumption per unit of net material product. This concerns mainly material inputs, and particularly fuel and power resources and ferrous metallurgy structural materials. Our high consumption of fuel and power resources in relation to formed national income is well known and becomes especially glaring in international comparisons. These must, however, be related to the foreign relations of the CSSR which account for 40 percent of domestic consumption of fuel and power resources, and particularly with regard to the level of world fuel prices. Increasing net costs for imports of fuel and power resources must, after all, be covered by increased physical exports at a time when national income is growing relatively slowly, which means that such increases will be at the expense of domestic utilization of national income. Likewise excessive and well known are high consumption parameters, particularly for ferrous metallurgy products, especially in comparison with the most industrially advanced countries, or in comparisons of the consumption of metallurgical inputs with the value of machinery production. The value of Czechoslovak imports of fuel, ore, and ferrous metals increased in current prices from Kcs 12.6 billion in 1976 to Kcs 41.5 billion in 1984, i.e., by Kcs 29 billion, thus accounting for more than 50 percent of the total increase in value of imports over this time period. In terms of imports of these products from the community of CEMA countries, 55 percent of total increases in imports from these countries was attributable to such products. Our excessively high level of consumption of materials has been for a long time now shifted to the shoulders of foreign trade and has actually resulted in a "high tension" situation in the overall equilibrium of Czechoslovak foreign trade.

3. A further increase in the level of self-sufficiency in agricultural raw materials and food products by intensifying domestic production. The goal is to achieve a reduction in net import dependence such as has been achieved by the Czechoslovak economy. Since the mid-1970's our net imports of food raw materials and foodstuffs, including plant and animal raw materials (i.e., non-food raw materials) have been remaining at about the same level measured

by current foreign prices. Adjusted for price movements, this means that in physical terms imports have declined, which in turn has led to minimal growth in the physical sales of foodstuffs per capita.

4. A change in the main capital replacement objectives away from material inputs and in the direction of capital assets, consumer goods, and an increased role for the nonproductive industries. Such a gradual change will be evident in the role of the Czechoslovak economy in the international division of labor, and will lead to a change in the structure of relations with CEMA countries, and especially with the Soviet Union. In practical terms this means that in foreign economic relations there will be an improvement in the positioning of products either directly or indirectly linked with R&D work (machine tool and chemical products, consumer goods), increase the role of the nonproductive industries in such goods and that steps will be taken to allow them to make a contribution to our balance of payments.

5. Achieving an increase in national production and labor productivity above all by increasing the quality of use values of products accompanied by a commensurate increase in their price. This applies both to sales aimed at satisfying domestic demand (shipments for investment purposes and for retail inventories), as well as, and primarily, exports to foreign markets.

An Active Role for Foreign Relations

Attempts to prolong past economic development trends are destined to be failures. This is because there is a gradual growth in domestic constraints (labor force, investment opportunities, in raw material and fuel resources, ecological, etc.) as well as foreign constraints (price developments and relationships on world markets, the competitive environment, structural trends) which interact with each other to such an extent that the possibility of prolonging such trends is ruled out. It is, after all, scarcely possible to prolong a situation in which foreign economic relations were for a long time called upon to assure economic equilibrium in an environment of longstanding but shortsighted trends in capital replacement process. The outcome of this trend has been a stagnation in physical Czechoslovak imports. This showed up both in overall imports, as in the relations with the community of CEMA countries, as well as in a relatively rapid increase in physical exports. At the same time these developments could not help but leave their mark on the capital replacement process and particularly on the needed process of specialization of our economy. This program cannot be implemented without increasing imports primarily of products of processing industries.

Part of the problem lies in the fact that inputs of products with a direct or derived impact of R&D progress are not optimal ones for the Czechoslovak economy. This is confirmed by comparisons with developed countries of similar economic makeup. In particular it includes general engineering and chemical products along with consumer durable goods per capita. This latter indicator is at a significantly lower level than would be suggested by the size and maturity of the CSSR economy.

If we are serious about basing actions on the situation as it actually exists then all our strategic planning must be linked to an active exploitation of foreign economic relations and the functions of socialist economic integration. The achievement of high use values for products, which is the alpha and omega of a dependable and effective economic strategy, is connected with the necessity for emphasizing the comparative advantages of our economy, with emphasis placed on its industrial and processing sectors. The specialization process is, however, dependent on complex domestic and foreign production, technical or economic ties. As long experience has taught us, it is far from a matter of simply decreeing such a process. Rather such a program requires close ties to a specialized segment of the R&D base, and to a reliable and technically sophisticated production base represented mainly by the CEMA member countries. Dynamic and broadly based specialization requires just what has been so long called for; an efficient mechanism (that is as simple as possible) of effective ties to the external environment that will facilitate confident decisionmaking at the enterprise level. Requests for such ties began back in the late 1960's during work on the Comprehensive Program of Socialist Integration. The enterprise level is important because this is the level at which actual specialization and cooperational discussions are conducted, and the level at which rests the responsibility and permanent concern for the quality and technical sophistication of production and its broadest and most effective possible marketing on the world market.

From the viewpoint of the foregoing considerations one may establish the main objectives for the development of Czechoslovak foreign economic relations, which will in turn determine the strategy for our relations with the CEMA countries. These tasks may be formulated in several basic areas.

Without Unrecoverable Losses

A fundamental task must be to stop the current, and long standing negative trend in the development of actual exchange relations, which has led to unrecoverable losses in formed national income. It is still necessary to export increasing magnitudes of goods per unit of exports in order to balance our trade. If we take 1970 as a base year and assume that 1 unit of exports was then needed to balance 1 unit of imports, then in 1975 the ratio was 1.1:1, in 1980 it was 1.2:1 and it is currently 1.4:1. The fact that we must export almost 50 percent more product now than in 1970 per unit of imports is mainly due to the rapid growth in the need to increase net exports in constant prices. This exceptionally unfavorable development in actual exchange relations has been caused mainly by our high levels of imported fuels and other raw materials (which, in view of the prospective restriction of resources, will probably over the long term tend upwards to a high price level), the structurally narrow and on the whole unsophisticated nature of our imports (which makes it impossible partially to compensate for losses due to the sharp increase in fuel prices through a sufficient number of partial concessions from specialized relationships), along with the low level of use values in our exports. We must therefore work intensively to alter this trend, which at this time has an undesirable momentum of its own. This means making efforts to minimize import needs for fuels, or to reduce them in absolute terms, to shift the center of gravity of imports to favor products that will

facilitate intensification, the restructuring of exports in the direction of our most efficiently produced products, while at the same time supporting enterprises with promising export programs. Because of the above mentioned worsening in exchange relations (by 33 percent since 1970), their improvement shapes up as a long term matter, even though a short term objective is to stop their gradual worsening.

Fast Growing Net Imports

No less important is the achievement of changes in the growth rate of physical imports, which over the long term have developed inadequately mainly in terms of national income formation. Even though desirable developments have been slowed up by the above mentioned fluctuations in real exchange relations and the danger of a negative trade balance, the fact remains that the growth rate of physical imports fluctuated for a long time in close conjunction with national income and, from the mid-1970's even grew more slowly. (see Table No 1)

Table No 1. Ratio Between Growth of National Income and of Physical Imports

	Indexes (1970=100)				
	<u>1970</u>	<u>1975</u>	<u>1977</u>	<u>1980</u>	<u>1984</u>
a) National income	100	132	143	158	167
b) Imports in constant prices	100	137	151	158	161
Ratio b:a	1.00	1.04	1.06	1.00	0.96

Because the development of world prices and the system for incorporating them into trade between the CEMA countries makes it possible to determine relatively reliably that over the foreseeable future there will be no repetition in our economy of the same unfavorable price evolution, thus reducing the danger of further losses from the unfavorable impact of actual exchange relations, the conditions are at the same time being developed for an increase in the growth rate of physical imports. The objective must be a growth rate for physical imports well in excess of the growth rate of national income. The accepted developmental parameters for the CSSR economy which project annual 3-4 percent average growth rates in national income thereby also set a floor under discussions of the import growth rate. This should achieve rates that are higher by at least 1 percent. This means that physical imports should roughly double by the end of the century.

Projected economic development is not solely a matter of quantitative characteristics but is also, in line with intensification concepts, also a qualitative matter. At the same time, however, quantitative problems cannot be lost from view and their role underestimated. Only by their interaction is it possible, after all, to achieve optimal functioning of foreign economic relations in the new period of the economic growth of Czechoslovakia.

Table No 2. Goods Structure of CSSR Imports

	Total	Machinery & Equipment	Consumer Goods	Material Inputs	Including: Chemical Products
Czechoslovak imports in billions of korunas:					
1974	44.0	16.0	6.2	21.7	4.0
1984	113.7	39.3	10.0	64.4	7.6
Increased imports in:					
In billions of korunas	+69.7	+23.3	+3.8	+42.7	+3.6
In percent	100	33	6	61	5

Note: machinery and equipment (capital assets) are represented by group 1, consumer goods by 8 and 9 and material inputs (raw materials, fuels, materials) by groups 2-7 as defined by the foreign trade nomenclature of the CEMA

Other Structures of Inputs

An important aspect of foreign relations is the necessity for changing the input structure of our economy and the qualitative and technical parameters of imported products. The problem of import structure as it exists under actual pricing conditions, and the necessity of changing it, may be illustrated by developments of the past 10 years by breaking down the goods structure based on the economic purpose of the products (table No 2).

The value of Czechoslovak imports, and mainly of their growth over the past 10 years, has been focused in the area of material inputs, thus suppressing the potential for importing products related to R&D concerns. Moreover, this forced us to minimize opportunities to increase imports of consumer goods: the achieved growth was choked off by increases in import prices. The same was true of imports from CEMA member countries.

The material inputs that play such a role in the total value of our imports include fuels as their most important component, even though the impact is felt with some time delay. In the early 1980's Czechoslovakia stopped the growth of these imports (fuel imports to the CSSR were 664 petajoules, in 1975 977 petajoules, in 1980 1229 petajoules, and in 1983 1162 petajoules, where peta (P) represents 10^{15}). The value of fuel imports, however, rose sharply right at the beginning of the 1980's. While in 1970 fuel imports cost Kcs 2.5 billion, in 1980 they cost Kcs 15.3 billion, in 1983 Kcs 31.1 billion, and in 1984 Kcs 35.3 billion. The average cost of importing 1 joule of energy thus increased by a factor of 6.9 between 1970 and 1983. This year the factor will be closer to 8.

This problem, one of the most serious we face in the foreign arena, is especially significant when evaluating changes in separate balances representing the main directions in net inputs or outputs either into or from the Czechoslovak economy (See Table No 3).

The growth in the value of materials imports, which concentrated on the community of CEMA countries (especially the USSR), generated the necessity to increase exports of machinery and equipment and consumer goods. While in 1974 the ratio of the values of Czechoslovak exports and imports of machinery was 100:83, and for consumer goods 100:73, in this past year the same commercial indicator for machinery stood at 100:61 and for consumer goods at 100:49. Increases in machinery exports between 1974 and 1984 were covered by increased imports of these same items of 52 percent over the same period, while consumer goods imports (food and durables) increased by only 32 percent. The problem of inputs is related to the problem of quality, technical sophistication, range of product mix, etc., i.e., problems which have been emphasized in other CEMA countries. The Soviet Union has been giving priority to these problems for some time now. The same is true, however, of our imports from other CEMA countries, the more so because the Czechoslovak economy is among those whose foreign relations are predominantly oriented towards this community. Suffice it to state that the CSSR imports 80 percent of its machinery imports from the CEMA (and 60 percent of its consumer goods). Especially for imported machine tools which are used directly in the economy over a long period of time as part of the production process and which are directly related to labor productivity, it may be stated that their production-technical and qualitative parameters are, and will continue in the short run to be, more important than pricing (not to underestimate the price factor).

Table No 3. Foreign Trade Balance (in billions of Korunas)

	Total	Machinery & Equipment	Consumer Goods	Material Inputs	Including: Chemical Products
1974	-2.8	+3.2	+2.3	-8.2	-1.8
1984	+0.5	+25.0	+10.4	-34.8	-1.3
Change in balance	+3.3	+21.8	+8.1	-26.6	+0.5
Of which:					
CEMA countries	-5.0	+18.6	+6.6	-30.2	-0.5

Optimize Trade With All Areas

Another of the basic tasks is the redevelopment of the territorial structure of Czechoslovak foreign trade. World economic and international political developments have resulted in a significant change in the territorial structure of our foreign trade, both imports and exports. For practical purposes both of these markets have been constricted within the actual price relationships of the world market (see Table 4).

Table No 4. Regional Shares of Czechoslovak Exports/Imports (in percent)
(based on current prices)

	CEMA	USSR	Including: Other Socialist Countries	Developed Capitalist Countries	Third World Countries
Exports					
1974	62.0	29.7	5.4	24.0	8.6
1984	70.8	43.4	5.2	16.2	7.8
Change	+ 8.8	+13.7	-0.2	- 7.8	-0.8
Imports					
1974	60.1	27.3	4.9	27.7	7.3
1984	76.3	46.8	4.3	15.1	4.3
Change	+16.2	+19.5	-0.6	-12.6	-3.0

This change, especially the trend of the past decade cannot continue, because it has been strongly affected by price fluctuations. The further development of the territorial structure of foreign trade, which will most probably again be determined mainly by the factor of physical movements in imports and exports, will necessarily be oriented to the optimal utilization of all regions of the world economy in support of the dynamic and efficient development of the Czechoslovak economy. The differentiated expansion of relationships especially in relation to other socialist countries and Third World countries, for which prospects look bright over the long term, as well as relations with developed capitalist states based on mutual advantage should combine to create new preconditions for improving the integrational ties between the community of CEMA countries. A long term economic strategy, after all, should not be a matter of an antithetical process but of mutually reinforcing developments guided effectively and rationally by the center. This involves, however, placing much more emphasis than to date on the transformational role of foreign economic relations. The necessity is especially evident for gradually but significantly restructuring our exports to developed capitalist countries and improve our import structure from Third World countries.

Common and Specific Elements

If the primary context has been outlined within which the long term trends in the foreign trade of the CSSR are to fluctuate, this then provides the basic coordinates of relationships with the CEMA community. This follows from the fact that the CEMA countries account for almost 75 percent of our total foreign trade.

The prospects for our foreign economic relations with CEMA countries have many things in common with the strategies of the other member countries.

These follow from the planning mechanism, the main characteristics of economic policy and from the interactions of the capital replacement process that has evolved during the existence of the community. Similar characteristics are also being displayed by the active, planned participation of our economy in the key developmental objectives of the community. At the same time the planned support and improvement of specific, original aspects of the Czechoslovak economic structure that are clearly evident in our exports is a pressing task related to the very basis of specialization. It is essential to back up these peculiarities with technical and production inventiveness applied to the production base and to modify them with numerous specializational and cooperative programs implemented directly by the enterprise sphere. Above all, the growing numbers of these programs should gradually tend towards an increase and optimization of the degree of integration of our economy within the integration process and the international division of labor.

The well known views of economist of the CEMA countries confirm by their modesty and constructively critical attitude that future national income growth from industrial and agricultural production, as well as the main objectives for the utilization of national production (i.e., investment and personal consumption) within the community offer a generally favorable opportunity for the further development of mutual economic relations. These views define, however, important structural changes related to capital replacement, emphasizes the role of R&D factors, quality, and the efficiency of the capital replacement process.

Projections concerning the development of national income toward the end of the century fluctuate between 3 and 5 percent average annual growth including the Soviet Union, which would mean an increase in the economical potential of the community with a lower limit of a factor of two-thirds, and an upper limit of a factor of 2 times greater than the current factor by the end of the century. This is related also to a progressive rise in import requirements and export possibilities, but in a structure that differs from the current one. Projections concerning the development of industrial production involve even higher figures: the mutual relations between their main branches are slated to undergo changes aimed at modernizing the ties between the branches producing material inputs and capital assets, as well as between the branches producing material inputs and those producing consumer goods. The main objectives for utilizing national income include a speeding up in increases in the standard of living in close conjunction with a projected growth in labor productivity. In this regard it should be stated that the development of the agro-industrial complex in the CEMA countries may be illustrated by the objective of achieving approximately 1 ton of harvest per capita. This would without any difficulty resolve the food problem within the community and eliminate the temporary but significant import requirements for agricultural products. In capital investment attention is generally paid to structural shifts in conjunction with support for developing the tertiary sphere, conserving fuel and other materials, and primarily a shift in favor of the upgrading of capital assets and the accelerated introduction of modern equipment and techniques into the production process.

The above outlines of the quantitative aspects of future development are, however, conditioned on the achieving of high qualitative parameters in the following areas:

-- The use of raw materials, fuels and materials, i.e., in minimizing their consumption per unit of production. The results of this should be evident above all in a decline in import requirements for them. This will result, in addition to moderations in previous price growth, also to a significant decline in the importance of material inputs in the trade between CEMA member countries over the long term;

-- Labor productivity, based on the installation of state of the art equipment and the optimal utilization of the advantages of integration. This will without a doubt be evident both in an increase in machinery investments and in an increase in the need for imports of machinery and equipment (with advanced performance characteristics, operationally reliable, and to state of the art specifications). No concessions can be considered in this regard without threatening basic developmental objectives;

-- The supply of consumer goods, the expansion in the product mix available and, especially, an increase in product availability to consumers in response to constantly diversifying tastes. This again must inevitably become evident in the development of mutual trade in consumer goods among the CEMA countries.

Realism Today and in the Future

On the whole the Czechoslovak economy must prepare for a fundamental and objective structural change in trade with the CEMA countries. The focus of future developments, including pricing arrangements, will above all be an increase in the use values of deliveries along with considerable emphasis on the internal branch and internal divisional division of labor. The simple transformational function of our economy, characterized by an increase in imports of raw materials, fuels and structural materials, and a commensurate increase in exports of processed products must therefore be replaced by a more complicated transformation with a structural, specializational and R&D impact above all on the processing industries.

It is clear that the community of CEMA countries is differentiated by the magnitude of the participating economies, their economic and technical maturity, natural conditions, location, etc. This is the reason that the Czechoslovak strategy for relations within the CEMA has not only shared characteristics, but specific ones as well. If in relations with the Soviet Union we are to continue to maintain the importance of an intersectoral division of labor in the form of large scale exchanges of products from processing industries (engineering and consumer goods) for our imports of raw materials, fuels and materials, which has been one of the main conditions of the economic development of Czechoslovakia, then it is necessary to keep two facts in mind.

In the first place this relationship cannot be reproduced in an enlarged form in the future. This means that it will not be a factor in the future

growth of cooperation between the CSSR and the USSR. In our relations with the USSR it is also necessary to seek out realistically the main paths for the further expansion of internal branch and internal divisional division of labor in the processing industries, not only in general engineering but also in chemical, consumer goods and food industries.

In the second place it is essential to plan on an increase in the amount of processing applied to primarily imported, but also exported materials. There is considerable opportunity here (out of total Czechoslovak imports of material inputs from the USSR valued at Kcs 41.6 billion in 1984 fuel accounted for Kcs 32.9 billion and other materials for Kcs 8.7 billion). In this regard, and this applies not only to relations with the USSR but also to relations with other CEMA countries, it is becoming necessary to implement a long range, comprehensively thought out import strategy needed for the specialization process which would at the same time be adequately advantageous and attractive for other CEMA countries. This strategy is still only weakly emphasized in economic strategy.

In relation to the other European CEMA countries a trend towards mutual structural equilibrium between exports and imports clearly formed in the 1960's. Without analyzing the reasons and shortcomings of this situation this should be taken as a fact strongly influenced by central regulation. Because the integration mechanism is not functioning effectively enough the expansion of specialized and cooperative relationships is not progressing fast enough or to the requisite extent nor is the correct growth rate being achieved in purely commercial ties oriented at an expansion and mutual supplementing of the supply structure. If the problems of the mutual economic relations of the European CEMA countries have weakened, for subjective and objective reasons, their position in the hierarchy of problems in the foreign economic relations of the CSSR, then it is necessary to search for a future important source of effective development for our economy. For objective reasons these relations will be focused on processing industries and their structures. Products of general engineering, chemical and consumer goods industries, as well as the food industry will be the front runners.

On the other hand, for the non-European CEMA countries one may predict gradual changes above all in the structure of our imports related to the progress of their industrialization process.

Future strategic plans for the period to the end of the century cannot get by without a clarification of a specific trajectory between the current status quo and the long range objective: for this reason the requirements of long range goals cannot yet be placed on near term developments. In the immediate future priority must be given to the mastery of the process of adaptation to potential new directions. This period will be characterized by the following:

-- An attempt to eliminate those agreements in foreign relations that were forced upon us by an exceptional situation and did not represent sensible

commitments for us. This mainly involves those exports which were chosen for their contribution to assuring equilibrium to the balance of foreign relations.

-- A principle of strict conservation, the elimination of clear instances of waste in production processes and a strengthening of production discipline with the goal of reducing losses arising from warranty claims from foreign customers, etc., in other words the mobilization of the most accessible reserves in terms of time.

This development will be accompanied by the establishment and building of potential future programs appropriate to an intensive mode of development, and which require a comprehensive and assertive attitude to foreign relations (these cannot play second fiddle) from the R&D base through capital investment right through to the import/export strategy with regard to the world economy. This will create significant opportunity for creative initiatives at all levels of economic management.

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ECONOMY

GERMAN DEMOCRATIC REPUBLIC

STATISTICAL METHODS, CONSUMER PRICE CLAIMS QUESTIONED

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[Article by Dr Gernot Schneider, former Professor at the East Berlin College of Economics: "Observations on Consumer Price Trends in the GDR"]

[Text] The development of consumer or retail sales prices is of decisive significance for the development of a currency's purchasing power, and thus also for computing consumer parities. 1) In conjunction with the income pattern, price development decisively influences the population's level of consumption and standard of living.

In centrally administered economies of the Soviet type, the party leadership has a monopoly of price fixing, with the assistance of the appropriate authorities (Price Office, price councils, etc.) and through decreeing official price formation directives. It decides the structure and amount of prices for goods destined for private consumption.

At every occasion, Honecker points to the great achievement that for over 25 years, the population has been able to purchase basic foodstuffs, energy, transport services and even some industrial goods at unchanged prices, since according to his political creed, consumer prices are "a direct part of the climate of social security and safety" and "are an essential achievement of extant socialism." 2) Indeed, the Statistical Yearbook of the GDR (see Table 1) not only confirms that the index of retail sales prices, i.e., the index characterizing average price changes, has not risen since 1960, but actually even declined somewhat.

Experts from the FRG also certify that, in their opinion, the GDR leadership had tried to keep the price level stable, with "relatively good success." After all, the official GDR index of retail sales prices has been at 100 "for decades." It is only since the end of 1979--according to the experts--that the principle of constant consumer prices in the GDR was relaxed and that quality goods, in particular, had become considerably more expensive, but this trend "evidently did not continue at the same rate during past years as it did in the beginning." 3)

Another observer of the GDR scene comes to a different assessment of the price development. Pointing to the new price policy principle announced by

the GDR leadership in December 1979, he notes: "This opened the way to also allow open price increases, in addition to the present practice of hidden price increases via product changes (emphasis by G.S.), due to more expensive input in newly calculated products. Not much later, existing price freeze regulations were revoked." And he continues: "For the population, the decisive problem in this context is that, with the exception of totally unchanged products, the people can no longer recognize the extent of price increases (emphasis by G.S.)." Finally, he writes: "The 'price merry-go-round' is now turning faster, since price adjustments cover several production stages at the same time and increasingly include consumer goods, also. As of 1 May 1980, price formation for products of 'a thousand odds and ends' was newly regulated, and since September 1980 there are new prices for individual interior finishing work. As of January 1981, prices were newly fixed...for an extraordinarily large number of goods." 4)

Thus one statement contradicts the other, and one gains the impression that there are valid arguments for both viewpoints. To get closer to reality, it is evidently necessary to deal more intensively with two sets of questions. The first touches on information sources, the nature and indicative value of "official" statistics and other published data. The second aims at evidence how the price development for private consumption was actually put into force, and where the trend is pointing.

Socialist Information Policy

The textbook Allgemeine Statistik [General Statistics] to which, over 20 years ago, Arno Donda contributed--today he is the director of the State Central Administration for Statistics of the GDR and a member of government--, states that socialist statistics are "an indispensable control instrument for the party of the working class and the socialist state." A fundamental condition for their scientific character is their development "on the basis of Marxism-Leninism." And for anyone who believes the figures of GDR reporting, the same textbook states even more clearly: "Statistical information and analyses must proceed clearly and unequivocally from the class viewpoint, i.e., they must be biased." 6) (Emphasis by G.S.).

Basically, this is not a new insight for economic scientists in the FRG. Almost 30 years ago, Wilmut warned against accepting socialist economic statistics as a method impartial to the system, and timeless. 7)

To mention this in first place does not mean to deny that a centrally administered economy, compared to market economic systems, has more favorable preconditions in the most varied areas in order to present and analyze precisely and comprehensively a concrete economic situation and the past overall economic development. There is no lack of statistical basic material available in the GDR, albeit of varying quality. State-owned enterprises and the control and management authorities have to prepare a growing flood of material for reporting purposes. This ranges from day-by-day accounting of plan fulfillment to the annual business

report. It is striking that these reports of statistical facts are more and more elevated to the rank of state secrets, i.e., they are declared "confidential classified material," or at least, "confidential official material." Confidential data, however, are subject to prohibition of publication. Disclosure of statistical data is decided solely by the State Central Administration for Statistics, after approval by the Politburo. It carries out the "biased" selection and preparation of the primary data. As an instrument of the GDR government, it must take care that the official statistics support the political successes of the SED regime, and that failures remain largely unnoticed.

Economic scientists of the GDR are aware of these problems. In an internal working paper, Wilde writes on the subject: "Frequently, it is not possible to assemble the time sequences directly from original data which often cover only individual years or shorter time periods, because the methods of recording or categorizing, or else the units of measuring, have changed. Unfortunately, this is particularly true for the relatively short time period of 1960 to 1974 in GDR statistics. Extensive reassessments, in part possible only because the original statistical material can be obtained (emphasis by G.S.), are an inevitable consequence." 8)

As Wilde correctly points out, if an economic scientist in the GDR wants to discover more of reality, he must inevitably penetrate to the original statistical material, if possible. Not an easy task, but his research and teaching depend on it. Toward the end of the 1970's, when the economic failures could no longer be retouched even through the cleverest partisan interpretation of these internal data, the faculties at colleges and universities were obligated to omit "confidential" research results in publications and lectures and to rely solely on official statistical and other information data.

Statistical reporting in the GDR leads a double life, also, an official and an internal one. The population is familiar with such forms of existence. They know what to make of published economic data, are skeptical on principle, and do not credit them with nearly as much significance as is given them by state agitation and, sometimes, FRG economists.

The people in the GDR have not forgotten that during times of particular difficulty for the authorities, the latter prohibited publication of certain statistical data already weighted in a partisan manner, and even today they catch out the regime in the attempt to use official reporting as a means of "class struggle." To give only a few examples:

- Since 1955, the actual number of those employed in the national economy is reported too low, because employees of the Ministries of the Interior and State Security, the police, Armed Forces and enterprises in their charge, and the Soviet-German Corporation Wismut are not listed;
- Export and import figures between 1977 and 1979 are kept secret;
- In the accounting of the national budget between 1980 and 1984, no proof

of use of funds was given for 20 to 25 percent of the budget (in 1984, that meant 43 billion Marks), and the funds for internal and external security are listed as only 8.5 percent of the budget;

--The relevant economic performance indices are calculated not on the basis of effective prices but rather at constant target prices, and this price base is being changed at 5-year intervals.

These examples were selected arbitrarily, and they could be expanded at will, also concerning consumer prices. But they suffice to establish the result of the first set of questions: No one can be accused of having to rely on official statements and "biased" information in assessing the economic situation of the GDR. But one can prevent oneself and others from drawing "biased" conclusions from these data only if one doubts all official statements, as do GDR scientists themselves, and verifiably uses all chances to either prove or disprove these doubts.

Price Development and Price Policy for Consumer Prices

The information difficulties encountered in the analysis of consumer price development are deliberate. They evidently result from the fact that the GDR leadership--like other East bloc countries--has abandoned the "basic line of state price policy in the area of retail sales prices" as postulated in the textbook on political economy of socialism. This basic line "consists in the gradual lowering" 9) of consumer prices, naturally in accordance with an increase in work productivity. Once upon a time, lowering of retail sales prices was considered an essential factor for raising the "prosperity of the masses;" it expressed the lowering of production and trade costs and a growing amount of goods. 10)

But this basic line began to falter in the GDR as early as 1960, because more extensive price drops, which had been normal before, no longer took place later on, when work productivity continued to rise and the "fruits of diligent labor" could no longer flow unhindered to the West after the building of the wall. Comprehensive price drops were inadvisable because the population had already accumulated income in 1960-1961--primarily earned in the basic material and production material industry--for which there were insufficient goods supplies due to the weak performance of its own consumer goods industry. 11) This increase in income put pressure on stable prices--at first only on the part of the manufacturers of consumer goods who tried to solve the problem through price increases, while the representatives of domestic trade observed the officially decreed price stability as well as they could and demanded more goods.

Pressure on the relatively low consumer goods prices grew when, on 1 January 1967, new industrial prices were introduced. These new industrial or factory prices were to take the place of the fixed prices in force up to then, and were largely to take into account the obviously higher production costs (among other things, fixed assets had been revaluated). Although it was stressed time and again by the authorities 12) that industrial price reform would not affect the price of consumer goods,

since this would have negative consequences for the population's standard of living, exactly the opposite occurred in practice.

For better understanding, the following must be added: the SED price policy regarding consumer goods is directed at three price types--Type 1 concerns goods of basic requirements. The prices do not cover the costs accrued, thus they are subsidized prices. Price type 2 just about covers expenditures and also produces an operational profit (Product A in Table 2 corresponds to this price type). Price type 3, on the other hand, is applied to products which are to realize an additional, product-related levy for the state (a kind of "consumption tax"). Table 2 indicates the possible extent of such a "consumption tax" with regard to a man's suit made of various outer materials. It is important to note that this product-linked levy is definitely not a "luxury tax" in the usual meaning of the word, since at that time (1969/70) about 60 to 80 percent of all purchases of suits in the GDR were in the middle range of the price scale (between 180 and 250 Marks) 13), so the greatest part of product-linked levies came also from there. The situation is similar in other consumer goods assortments.

We can leave it open whether this type of price formation can be considered sensible, social, or even "successful." 14) Within the framework of industrial price reform and its resultant increase in factory sales prices the upshot was that, at unchanged consumer prices, the state had to provide additional subsidies and had to waive some of the product-linked levies collected up to then (operations profits and trading margin are presumed to be constant). How was this price policy to absorb excessive purchasing power and satisfy consumer demand? After the reform of industrial prices, the stability of consumer goods prices could no longer be maintained. Truth was "that even with a basically secured price stability (that was a bow to the Party's valid price policy! - G.S.), average prices rose due to improved utility value and the shift to high-quality and easy-care materials." 15) To give an example: during the period 1967 to 1972 (also see Table 3), a 151 percent increase in the amount of consumption of ladies' knitted outerwear was juxtaposed by a 222 percent increase in the consumption value. 16) The development was almost parallel in other ranges of clothing, such as leather shoes.

It was already discussed previously how the contradiction between consumer demand, fueled by available funds, and the availability of goods became aggravated by the end of the 1970's and later. 17) It can be seen today that the rather sparse amount allocated for the population's supply stayed considerably below the state's plan requirements for various consumer goods (see Table 4). If one also considers the great number of recent price reforms (i.e., price increases) in the trade industry, one can certainly not speak of a development which would lower the pressure on price increases for consumer goods.

A glance at the official GDR reporting mentioned previously provides little help in clarifying these "phenomena." Official price indices are determined on the basis of a constantly changing purchase structure (at

present, on the basis of 1980), and the 2,500 representative types of goods 18) are not accessible. If one also consults the 80 product prices which are given in their absolute amount, then the product selection made shows the intent: biased interpretation of the SED leadership's price policy.

If one wishes to make a contribution to the analysis of price development in private consumption, as a kind of "counterpresentation", there is only the route via field research. Starting from the prices for everyday consumer goods published in the Statistical Yearbooks from 1955 to 1960/61, comparable prices--excluding luxury goods--were researched for April 1985. Table 5 provides an overview; in a way, it is the "counterproof" of the prices of 38 industrial goods listed in the GDR Statistical Yearbook of 1984. The difficulty consisted in filtering out products from the old data which are part of the needs of an average household, and which are still largely comparable in quality to today's supply. With one exception, one recognizes a considerable trend of price increases, although the products selected are only technically simple and everyday goods. Price increases range from 3 percent (for two-piece ladies' underwear of rayon) to 1,329 percent (for a drinking glass). Without trying to overestimate the results of this field research, they seem sufficient to disprove, or at least strongly question, the theory of price stability over the decades.

Summary

Price development of goods for private consumption is a foremost political issue in the GDR. For this reason, the SED leadership insists on its monopoly of price formation and certification. The special explosiveness of the development of consumer prices stems from the fact that price increases for obviously comparable goods can neither be hidden from the population, nor can they be interpreted as the result of a successful economic development. Massive and simultaneous appearance of such price increases can cause political confrontations--as proven by the experiences in other socialist states, just recently again in Poland--, particularly if no supportive measures are taken to avoid social hardships, and if the population rejects state power. Since the GDR leadership, despite special internal "basic conditions", neither dares to adopt an open price revision, nor can it ignore totally the realities of the national economy, it pursues the following price strategy for consumer goods: firstly, it reduces drastically--overtly or covertly--the range of products for which subsidized prices are in force. This does not always require an application for price changes. It is enough--as the example of men's cotton socks for 2.45 Marks shows in Table 5--to continue carrying these products in the official price lists, but to eliminate them completely or almost completely from the supply and replace them with more expensive goods. Or--and this is also part of the strategy of relatively stable prices--one changes the price-performance ratio through extensive reduction of the products. Table 5 shows appropriate examples, particularly in the case of bed sheets and men's cotton underwear. Secondly, one attempts to obtain considerably higher prices for comparable products by way of proving, or claiming, greater artistic or functional development (through fashion

novelties, or artistic and quality descriptions), and even through luxury levies for goods which are increasingly produced in the GDR. In this way it was managed, for example, to raise the price for a semi-automatic washing machine, which in 1968 represented the highest technical level in the GDR, from 1,430 Marks at that time to today's 2,750 Marks for a fully automatic washing machine with energy-saving features. Thirdly, the party leadership bets on "new" consumer goods for which, if possible, there are no comparable products in the GDR as yet, so that the scope for moving prices upward can be extensively utilized. SED economic policy aims in precisely that direction, which demands from all industrial combines their own consumer goods contribution (at least 5 percent of the net product), and as of 1986, insists on a permanent renewal of the consumer goods range by 40 percent annually.

The GDR political leadership will only hesitantly agree to acknowledge officially this policy of price increases. Agitation about "tendentiously" stable consumer prices, an "economic miracle," completely bypassing actual living conditions, still predominates, which is no longer professed by the leaderships of the other states of "true" socialism. The Statistical Yearbook of the GDR will prove largely stable consumer prices as long as the party leadership demands it. To mention just one example, statistics will prove that a box of matches has always cost 0.10 Marks. It is of no importance whether matches are even needed in electrified households with long-distance heating, and whether smokers have switched to western gas lighters, received as a present or dearly purchased. The situation is similar in the case of goods which are inexpensive but in short supply.

Clarifying actual rules for the price development of goods for private consumption in the GDR, which consist of 300,000 different products, 19) is an almost insurmountable problem even for well-informed and honestly trying GDR scientists. Access to important primary sources is often denied them, even if they only want to research without publishing their findings. Since without this internal information the danger of a politically one-sided assessment--favorable to the interests of the SED leadership--cannot be excluded, outsiders should approach this subject only with the greatest of caution.

Whoever makes statements about price developments in the GDR and also wants to claim scientific seriousness, must reveal his data base, so that the skeptic with expert knowledge can also reconstruct without prejudice how the findings were arrived at.

FOOTNOTES

1. Compare Heinz Vortmann/Cord Schwartau: "Das Kaufkraftverhaeltnis zwischen D-Mark und Mark der DDR 1983" [The Ratio of Purchasing Power between D-Mark and GDR Mark 1983], in: DEUTSCHLAND ARCHIV, No 7/1984, pp 730ff.
Gernot Schneider: "Hat die Ermittlung innerdeutscher Verbrauchergeldparitaeten einen Sinn" [Does it make sense to establish intra-German

consumer fund parities], in: DEUTSCHLAND ARCHIV, No 9/1984, pp 39ff.
 Heinz Vortmann/Cord Schwartau: "Zur Berechnung von Verbrauchergerd-
 paritaeten zwischen D-Mark und Mark der DDR" [On the computation of
 consumer fund parities between D-Mark and GDR Mark], in DEUTSCHLAND
 ARCHIV, No 1/1985, pp 39ff.

Wolfgang Stinglwagner: "Noch einmal deutsch-deutsche Kaufkraftver-
 gleiche: Haben sie einen Sinn?" [Once more, German-German comparisons
 of purchasing power: do they make sense?], in: DEUTSCHLAND ARCHIV,
 No 3/1985, pp 272ff.

2. Erich Honecker: Zur Vorbereitung des XI. Parteitages der SED [On the preparation for the 11th SED Party Congress], in: NEUES DEUTSCHLAND, 21 June 1985, p 3.
3. Heinz Vortmann/Cord Schwartau: "The Ratio of Purchasing Power...", op. cit., (footnote 1), p 740.
4. Manfred Melzer: "Wandlungen im Preissystem der DDR" [Changes in the GDR price system], in Gernot Gutmann (editor): DAS WIRTSCHAFTSSYSTEM DER DDR, SCHRIFTEN ZUM VERGLEICH VON WIRTSCHAFTSORDNUNGEN, No 30, Stuttgart 1983, pp 64/66.
5. See Directive Nr. Pr. 441 on price formation for luxury items of 10 February 1984, GBl, Part I, No 9.
6. Autorenkollektiv: Lehrbuch Allgemeine Statistik [Authors' Collective: Textbook on General Statistics], Verlag Die Wirtschaft, East Berlin 1969, pp 30-31.
7. Compare Adolf Wilmut: Analyse der betriebswirtschaftlichen Struktur der volkseigenen Betriebe [Analysis of the business administrative structure of state-owned enterprises], Wirtschaftswissenschaftliche Veroeffentlichungen des Osteuropa-Instituts der Freien Universitaet Berlin, Berlin 1958, Vol 7, p 147.
8. Gerd Wilde: "Analyse und Prognose der Entwicklung des individuellen Bedarfs und des bezahlten Verbrauchs in der DDR" [Analysis and prognosis of the development of individual requirements and paid consumption in the GDR], unpublished research report of the Institute of Socialist Business Administration (ISW) of the College of Economics "Bruno Leuschner," East Berlin 1975, p 5.
9. Autorenkollektiv: Politische Oekonomie des Sozialismus (Uebersetzung aus dem Russischen) [Political economy of socialism, translation from Russian], Verlag Die Wirtschaft, East Berlin 1973, p 429.
10. Autorenkollektiv: Lehrbuch Politische Oekonomie (Uebers. a.d.Russ.) [Textbook on political economy, translated from Russian], Dietz Verlag, East Berlin 1959, p 682.
11. Compare Klaus Schaefer: "Reproduktion und Konsumtion in der Entwick-

- lung der Volkswirtschaft der DDR in den Jahren 1950 bis 1963"
[Reproduction and consumption in the development of the GDR in the years 1950 to 1963], in: Hans Roessler (editor): "Beitraege zur sozialistischen Konsumtionsforschung" [Contributions to socialist consumption research], WISSENSCHAFTLICHE ZEITSCHRIFT of the Martin Luther University Halle-Wittenberg, special issue 1965, pp 95-168.
12. See: Fragen und Antworten zur Industriepreispolitik [Questions and Answers on the Policy of Industrial Prices, Dietz Verlag, East Berlin, 1969, p 15.
 13. Compare Gernot Schneider: System der Absatzwirtschaft und Absatzpolitik eines Kombinats der Leichtindustrie--Marktanalyse fuer das neue Erzeugnis, Forschungsbericht des ISW der Hochschule fuer Oekonomie [System of sales economy and sales policy of a combine of light industry--market analysis for the new product, ISW research report of the College of Economics], East Berlin 1969, p 23.
Helmut Raneberg: "Zur Theorie der Wirkung von Einkommens- und Preisentwicklung auf den Verbrauch an Industriewaren bei Arbeitern und Angestellten" [On the theory of the effect of income and price development on consumption of industrial goods by workers and employees], in: Hans Roessler, op. cit., (footnote 12), pp 409-447.
 14. Compare Gernot Schneider: "Die oekonomische Strategie der SED im Spiegel des privaten Verbrauchs--Analyse und Tendenzen" [The economic strategy of the SED as reflected in private consumption--analysis and tendencies], in: FS-ANALYSEN, No 6/1984, pp 37-38.
 15. Horst Model/Gernot Schneider: "Bedarfsgerechte Versorgung der Bevoelkerung--Konsequenzen an das Zusammenwirken von Industrie und Handel in den einzelnen Phasen des Leitungs- und Planungsprozesses" [Supplying the population according to need--consequences of co-operation between industry and trade in the individual phases of the control and management process], Forschungsbericht des ISW der Hochschule fuer Oekonomie "Bruno Leuschner," East Berlin 1975, p 26.
 16. Ibid.
 17. See Gernot Schneider: "Die oekonomische Strategie...". op. cit. (footnote 15), pp 27-50.
 18. Lexikon der Wirtschaft--Rechnungsfuehrung und Statistik [Economic encyclopedia--accounting and statistics], Verlag Die Wirtschaft, East Berlin 1974, p 143.
 19. Compare BERLINER ZEITUNG of 2/3 February 1985, p 3.

Table 1. Index of Retail Sales Prices in the GDR (1970 = 100)

Jahr (1)	Einzelhandels- verkaufspreise gesamt (2)	Einzelhandels- verkaufspreise für Nahrungs- u. Genußmittel (3)	Einzelhandels- verkaufspreise für Industrie- waren (4)
1955	113,8	112,2	115,4
1960	101,0	99,1	102,8
1965	100,7	98,6	102,6
1970	100,0	100,0	100,0
1975	98,1	101,1	95,2
1977	97,9	101,1	94,8
1979	98,2	101,1	95,4
1980	98,6	101,1	96,1
1981	98,9	101,1	96,6
1982	98,9	101,1	96,6
1983	98,9	101,1	96,6
1984	98,9	101,1	96,6

Quelle: Statistisches Jahrbuch der DDR 1984, Staatsverlag, Berlin (Ost) 1984, Seite 267, bzw. Statistisches Taschenbuch der DDR, Staatsverlag, Berlin (Ost) 1985, S. 110.

Key:

1. Year
2. Retail sales prices, total
3. Retail sales prices for foodstuffs and luxury foods
4. Retail sales prices for industrial goods
5. Source: Statistisches Jahrbuch der DDR 1984, Staatsverlag, Fast Berlin 1984, p 267, and Statistisches Taschenbuch der DDR, Staatsverlag, Fast Berlin 1985, p 110. <Statistical Yearbook of the GDR; Statistical Pocket Book of the GDR,...>

Table 2. Examples of the Price Structure of Men's Suits of Various Materials on the GDR Market in 1969, in Marks

Erzeugnis (1)	Endverbraucher- preis im Einzelhandel (2)	Handelsspanne gesamt (3)	produkt- gebundene Abgabe an den Staat (4)	Verkaufspreis ab Werk (5)	Relation 4:5 mal 100 % (6)
1	2	3	4	5	6
A	94,00	17,10	1,22	75,68	1,6%
B	128,00	23,30	43,04	61,66	69,8%
C	143,00	26,03	31,46	85,51	38,8%
D	150,00	27,30	22,01	100,69	21,9%
E	180,00	32,76	34,01	113,23	30,0%
F	188,00	34,22	63,08	90,70	69,5%
G	192,00	34,94	55,97	101,09	55,4%
H	203,00	36,95	67,05	99,00	67,7%
I	220,00	44,04	67,17	112,79	59,6%
J	263,00	47,87	117,16	97,97	119,6%
K	263,00	47,87	107,86	107,27	100,6%
L	278,00	50,60	124,10	103,39	120,1%
M	372,00	67,70	176,73	127,57	138,5%

Quelle: Errechnet aus: Absatzorientierte Preiarbeit, Forschungsbericht des Instituts sozialistische Wirtschaftsführung der Hochschule für Ökonomie, Berlin (Ost) 1969, Seite 5.

Key on following page

Key:

1. Product
2. Consumer price in retail trade
3. Profit margin, total
4. Product-linked levy to the state
5. Factory selling price
6. Ration 4:5 times 100 percent
7. Source: Computed from: Sales-oriented pricing, research report of the Institute of Socialist Business Management of the College of Economics, East Berlin 1969, p 5.

Table 3. Development of Average Consumer Prices for Ladies' Knit Outerwear in the GDR

(1) Jahr	Durchschnittspreis je Stück in Mark (2)	Entwicklung in Prozent zur Basis 1967 (3)
1967	47,71	100,0
1968	41,96	100,0
1969	45,30	108,6
1970	52,71	126,4
1971	54,92	131,7
1972	61,36	147,1
1973	61,10	146,5

Quelle: »Untersuchung des Bedarfs der Bevölkerung der DDR in den Jahren 1975 und 1976 bei ausgewählten Positionen«, Institut für Marktforschung Leipzig 1974, zitiert in: Horst Model/Gernot Schneider: Bedarfsgerechte Versorgung der Bevölkerung – Konsequenzen an das Zusammenwirken von Industrie und Handel in den einzelnen Phasen des Leitungs- und Planungsprozesses, Forschungsbericht des Instituts sozialistische Wirtschaftsführung der Hochschule für Ökonomie »Bruno Leuschner«, Berlin (Ost) 1975, Seite 26.

Key:

1. Year
2. Average price per item in Marks
3. Development in percent on 1967 basis
4. Source: "Study of the population's requirements in the GDR in the years 1975 and 1976 of selected items," Institute for Market Research Leipzig 1974, quoted in: Horst Model/Gernot Schneider: Supplying the population according to need--consequences of cooperation between industry and trade in the individual phases of the control and planning process, research report of the Institute of Socialist Business Management of the College of Economics "Bruno Leuschner," East Berlin 1975, p 26.

Table 4. Plan Figures^a and Actual Figures^b of Availability of Goods for Supplying the Population with Products of Light Industry

Position (1)	ME (2)		1981	1982	1983	1984	1985
Strumpfwaren (5)	T Paar	Plan: Ist:	159450 144529	166000 138207	168150 141982	171150 -	174150 -
Untertrikotagen (6)	T Stück	Plan: Ist:	164550 159104	167500 146198	164500 146569	168000 -	170000 -
Obertrikotagen (7)	T Stück	Plan: Ist:	37800 37293	36800 29199	38300 28980	38900 -	39500 -
Haushaltswäsche (8)	T Stück	Plan: Ist:	83050 86819	85000 74633	87000 83775	87825 -	89325 -
Straßenschuhe (9)	T Paar	Plan: Ist:	41000 41391	42500 41661	43100 42148	43700 -	44300 -
Hausschuhe (10)	T Paar	Plan: Ist:	23300 23119	23500 20087	23500 19900	26600 -	23700 -

a = lt. Staatlicher Planauflage (STAL) des Ministeriums für Leichtindustrie vom 18.5.1981.
b = errechnet aus: Statistisches Jahrbuch der DDR 1984, Seite 231.

Key:

- | | |
|---------------------|---------------------|
| 1. Item | 7. Knit outerwear |
| 2. Unit of quantity | 8. Household linens |
| 3. Planned | 9. Walking shoes |
| 4. Actual | 10. Slippers |
| 5. Hosiery | 11. Pair |
| 6. Knit underwear | 12. Apiece |

a = according to plan requirement (STAL) of the Ministry for Light Industry of 18 May 1981.

b = computed from Statistical Yearbook of the GDR 1984, p 231.

Table 5 on following page

Table 5. Consumer Prices for Selected Industrial Goods on the GDR Market in Marks

Erzeugnis (1)	1955 ^e	1960 ^e	1985	Preiszuwachs 1985: 1960 in Prozent (2)
H-Anzug (Kammgarn/Wolle 30 bis 60 v. H.) (3)	175,00-187,00	179,00	375,00 ^{a1} 415,00 ^{a2}	109/132
H-Sporthemd (Baumwolle) (4)	18,00-23,50	16,80	44,00	162
H-Sporthemd (Popeline) (5)	36,30	-	75,00-99,00	106-173 ^b
H-Unterhemd, lange Ärmel (Baumwolle) (6)	11,30	6,75	7,45	10
H-Unterhose, lange Beine (Baumwolle) (7)	9,75-11,20	6,75	7,75	15
H-Socken (Baumwolle) (8)	2,85	-	2,45 n.l. dafür 5,95-6,90	109-142 ^b
H-Socken, Ferse und Spitze verstärkte (Perlon/Mischgewebe) (9)	4,37	3,96	7,50	89
D-Rock (Wolle 40 bis 60 v. H.) (10)	60,00	58,30 ^c	128,00 ^d	120
D-Pulli, lange Ärmel (wollhaltig) (11)	40,00-43,75	40,00-43,75	75,00-170,00	71-289
D-Unterwäsche, zweiteilig (Kunstseide) (12)	11,30	-	11,65	3 ^b
Bett- und Kopfkissenbezug (Linnen) (13)	35,90-46,90	30,70-31,90	52,00-69,00	63-116
Laken (Baumwolle) (14)	24,50	18,30	18,35	-
H-Halbschuhe (Rindbox) (15)	67,00	-	110,00-140,00	64-109 ^b
H-Halbschuhe (Boxcalf) (16)	85,00	52,75	144,00-216,00	173-309
D-Halbschuhe (Rindbox) (17)	63,00-67,00	33,30 ^c	110,00-180,00	230-441
H-Straßenlederhandschuhe (mit Strickfutter) (18)	35,60	32,05	55,00-65,00	72-103
Aktentasche (Vollrindleder) (19)	138,90	111,25	125,00 n.l.	12
Schlafzimmer, Schrank 1,80 m (Eiche) (20)	1200,00	-	3500,00	192 ^b
Ausziehtisch, Durchmesser 90-100 cm (Eiche) (21)	90,70	-	338,00	273 ^b
Porzellanteller, tief, Durchmesser 24 cm (22)	1,30-1,58	1,40	12,80	814
Porzellantasse mit Untertasse (23)	1,24	1,25 ^c	5,50-6,10	340-388
Porzellankanne, 2 Liter (24)	5,20	5,20 ^c	14,00-27,70	169-433
Wasserglas, 200 g (25)	0,17	0,14	1,80-2,00	1186-1329
Thermosflasche, 3/4 Liter (26)	3,38	3,38 ^c	9,10	169
Hausbeil (27)	5,25	5,25 ^c	5,35-8,45	2-61
Holzstehleiter, 8 Stufen (28)	17,50	17,15 ^c	24,00 n.l.	40
H-Tourenfahrrad, 28 Zoll (29)	313,00	242,00	355,00	47
Bodenstaubsauger, 900 mm WS (30)	281,50	235,00	285,00	21
Eimer, emailliert, Durchmesser 28 cm (31)	7,80	5,80-6,35	16,50	160
einfaches Eßbesteck, vierteilig, rostfreier Stahl (32)	13,13	13,13	18,90-40,00	44-205
Fahrraddecke, 28 Zoll (33)	9,00	9,00	7,25-17,00	bis 89
Fahrradschlauch, 28 Zoll (34)	2,65	2,65	2,95	11
Allgebrauchslampe, 40 Watt (35)	0,98	1,00	1,00-1,50	bis 50
einfacher Küchenstuhl (36)	14,65	18,35	38,00	107
Bratpfanne mit Holzstiel, emailliert, Durchmesser 24 cm (37)	4,75	4,14	26,00-30,00	528-625
Bügeleisen, verchromt, mit Schalter und Signallampe (38)	24,90	23,45	33,00-45,00	41-92

a1 = Viskose/Polyesterfaser; a2 = mit Weste; b = Prozentzahl auf Basis 1955; c = Preis 1959; d = 70 v. H. Wolle; n.l. = nicht lieferbar; e = Statistisches Jahrbuch der DDR, entsprechende Jahrgänge

Key on following page

Key:

- | | |
|---|---|
| 1. Product | 19. Briefcase (cowhide leather) |
| 2. Price Increase 1985:1960
in percent | 20. Bedroom wardrobe, oak, 1.80 |
| 3. Men's suit (worsted/wool,
30 to 60 percent) | 21. Extension table, diameter
90-100 cm (oak) |
| 4. Men's sport shirt (cotton) | 22. Porcelain plate, deep, diam
24 cm touring bicycle, |
| 5. Men's sport shirt (poplin) | 23. Porcelain cup with saucer |
| 6. Men's undershirt, long
sleeves (cotton) | 24. Porcelain pot, 2 liters |
| 7. Men's long Johns (cotton) | 25. Water glass, 200 g |
| 8. Men's socks (cotton) | 26. Thermos bottle, 3/4 liter |
| 9. Men's socks, reinforced toes
and heel (perlon/mixed material) | 27. Household axe |
| 10. Ladies' skirt, (40-60 % wool) | 28. Wooden stepladder, 8 steps |
| 11. Ladies' sweater, long sleeves
(containing wool) | 29. Men's touring bicycle,
28 inches |
| 12. Ladies' underwear, two-piece
(rayon) | 30. Vacuum cleaner, 900 mm WS |
| 13. Bed and pillow cover (linon) | 31. Bucket, enamel, diam. 28 cm |
| 14. Bed sheet (cotton) | 32. Plain flatware, 4 pieces,
stainless steel |
| 15. Men's walking shoes
(side leather) | 33. Bicycle tire, 28 inches |
| 16. Men's walking shoes
(boxcalf) | 34. Bicycle inner tube, 28 ins. |
| 17. Ladies' walking shoes
(side leather) | 35. All-purpose light bulb, 40 |
| 18. Men's leather gloves
(with knit lining) | 36. Plain kitchen chair |
| | 37. Frying pan, enamel, with
wood handle, diam. 24 cm |
| | 38. Chrome-plated electric iron
with switch and signal light |
| | 39. Not available, substituted |

a1 = Viscose/polyester fiber; a2 = with vest; b = percentage figure on 1955 basis; c = price 1959; d = 70 percent wool; e = Statistical Yearbook of the GDR, appropriate issues.

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ECONOMY

GERMAN DEMOCRATIC REPUBLIC

FOOD-PROCESSING COMBINES DEVISE OWN MEANS OF RATIONALIZATION

Leipzig LEBENSMITTELINDUSTRIE in German Vol 32 No 4, Jul/Aug 85 pp 146-149

[Article by Dr Horst Muehlforte and Hartmut Traeger, engineer, College of Technology "Otto von Guericke," Magdeburg]

[Text] Summary

The legal responsibility of the combines for the self-construction of rationalization aids requires to utilize the capacity available and to provide new capacity. In the article demands and problems are explained that have influence on the efficiency of the preparation, manufacture and application of rationalization aids.

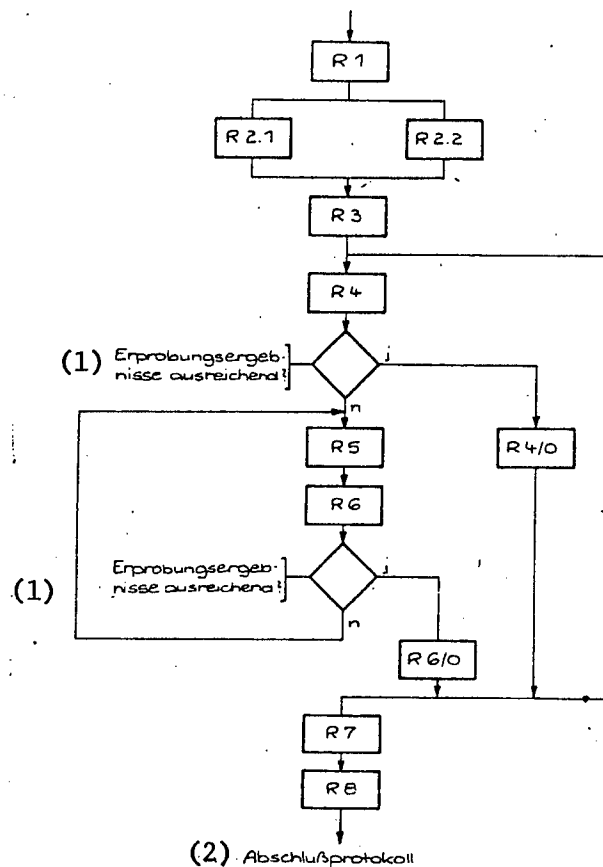
The quick conversion of the results of scientific-technical progress into production, the process of modernization and reconstruction of existing production equipment and the improvement of material working conditions of the workers are borne to a large degree by the employment of means of rationalization designed specifically for the respective branch and industrial enterprise and the type of product and process. The self-construction of these means of rationalization which, as a rule, are not standardized or produced in series, forms a necessary supplement to the conventional machine construction. Based on this relief, it is better able to provide the national economy with means of work of its production program and to meet its export obligations. As in all areas of the national economy, the self-construction of means of rationalization should be increased and made more effective also in the combines and enterprises of the foodstuffs industry. The efficient construction of means of rationalization in the combines deepens the relatively closed reproduction process because it permits concentrating on central tasks, an intensification of the combine effects and the overall strengthening of socialist production conditions. Frequently, self-construction of means of rationalization is a prerequisite for the reconstruction of entire production sections and process stages. The following complex tasks can especially be derived from the foregoing:

--the creation of a target-oriented scientific-technical lead for the self-construction of means of rationalization and in close connection with the development of specific means of work, production-related technologies and products,

orientation of the means of rationalization towards individual components, subassembly groups and complete equipment for the main and auxiliary production process, in particular with respect to modernization and reconstruction,

--improvement of the preparation of production of means of rationalization, especially the design preparation. It should be planned, conducted and accounted for according to uniform aspects exactly as for the main production of the enterprises, and permit a clear fixing of the date and responsibility, as well as an exact planning of expenditures and their control.

In Table 1 a classification in stages of activities is recommended for the new development of a means of rationalization which can be used for the planning and accounting of the design preparation of the production of the means of rationalization (see also Fig. 1). The construction of the means of rationalization is carried out in various organizational forms and with differences in the production organization. Nevertheless it is neither possible nor effective to conduct in every combine enterprise a construction of means of rationalization meeting the respective demand. In addition, divergent conditions prevail in the light and foodstuffs industries, as well as in the district-managed industry compared to the machine construction, mining or chemical industries. The latter, as medium- and large-size enterprises, have at their disposal considerable capacities of the metal-processing and metal-working industry, as well as maintenance (main mechanics). In the enterprises of the foodstuffs industry, which must be classified from the enterprise management aspect as small or medium-size enterprises, the capacities for the production of means of rationalization are given almost exclusively within the scope of the existing maintenance areas and are thus limited in capacity. The machine-technical resources and total working time available for the construction of means of rationalization are sometimes overestimated. Also, the false conception has not been overcome in every case, that with seasonal main production (vegetable processing, sugar production) "not much work had to be done" outside of the production season. The self-construction of means of rationalization must not lead to neglect of the maintenance-technical preparation of the production. On the other hand, seasonal production does not rule out the self-construction of means of rationalization. The preparation of the production season must be utilized for the rationalization of the main and auxiliary processes according to plan, as well as the modernization and reconstruction of existing equipment. Important tasks fall to the enterprise production of means of rationalization in the operational and scheduled rationalization, the realization of innovators' suggestions and scientific-technical measures, in the fulfillment of obligations from the territorial rationalization and the production of means of rationalization in the combine according to plan. The allocation of payments by the combine to its enterprises in the form of plan decisions relating to use-value has proven its worth. If such payments relate to deliveries to basic economic units outside the combine, the plan decision with reference to use-value represents at the same time an internal combine balance sheet decision. Orders placed with the construction of means of rationalization for the purpose of manufacturing either unobtainable spare parts or those believed to be unobtainable, of balancing omitted orders for materials or plan deviations from the preventive maintenance and reproduction of fixed assets according to plan, are incompatible with these tasks. Self-manufacture of means of rationalization



Flow Chart of Activity Stages According to Table 1

Key:

1. Testing results sufficient
2. Final protocol

does not mean that everything is produced in the enterprise. The construction of means of rationalization as a factor of economic effectiveness is to be subjected strictly to the balance and plan discipline, except for a reserve share for unforeseeable tasks to be fixed at about 15 percent of the total working time available. As to whether enterprise or central capacities should be built up in the combine or branch of industry, depends, i.a., on:

- the kind of means of rationalization to be produced,
- the repetition and frequency of the production of identical means of rationalization,
- the existing material-technical and structural prerequisites,
- the scientific-technical capacity (development, construction and projection capacity),

Table 1. Brief Features of the Activity Stages in the Construction of the Means of Rationalization

Activity stages	Brief features of the stages	Proof of fulfillment
R 1	Work out of the task and planning the way of a solution	Confirmed way of solution
R 2	Construction	
R 2.1.	New construction	
R 2.2.	Adapted construction with subsequent use of a rationalization solution	
R 3	Work out of the technological documentation for the economically most favorable variation	Confirmed test report (proof of the requirements in function, dependability and protective quality)
R 4	Construction and testing of the functional sample	
R4/0	Release for production on the basis of respective test results	
R 5	Revision and preparation of the production sample	Confirmed test report (proof of readiness for production)
R 6	Construction and testing of the production sample	
R 6/0	Release for production on the basis of respective test results	Production documents for the production of the means of rationalization
R 7	Completion of the documentation for the means of rationalization, review of the technological documents	
R 8	Overseeing production and supervision of the transfer of the means of rationalization into the rationalizing production section up to the attainment of the projected economic characteristics under operating conditions and securing of the overseeing performances	

Notation: The activity stages R4, R 4/0, R 5, R 6, and R 6/0 are carried out only in special cases; sometimes they cannot be done without complicated means of work and multiple production.

--the availability of readily usable labor forces from own reserves (Schwedter initiative).

The development and use of capacities for self-production of means of rationalization is to be prepared in management documentation with regard to profiling, concentration and specialization. The work division and cooperation planned for the long term, for instance with central rationalization enterprises or departments of the combine enterprises, is practical if the demand for certain means of rationalization has been demonstrated over a longer period of time. The construction of central areas in form of rationalization sections in a combine enterprise, autonomous combine enterprises or carrier enterprises of the respective production group is at any rate preferable to the enterprise rationalization areas. Central production plants have the advantage that they:

--are operating on the basis of the plan according to the principles of the economic accountancy,

--exhibit higher scales of production,

--are better equipped from a production-technical standpoint and can therefore produce relatively complicated working tools,

--have at their disposal larger capacities of the preparation for production,

--work out studies and documentation on the basis of coordinated concepts of means of rationalization,

--popularize proven solutions which organize multiple production and work actively on offers (catalogs of means of rationalization).

The production of means of rationalization beyond the requirements of the enterprise is an essential factor of high effectiveness of the construction of means of rationalization. Self-construction oriented on own requirements is almost always connected with socially unjustified expenditures. Its purpose of affording an economically effective rationalization thrust into production is then not attained. Some combines limit the construction of means of rationalization still to technically uncomplicated devices and equipment. However, means of rationalization with a high scientific-technical level are required increasingly for the long-term development of the effectiveness of the production. The new quality of working means coming from the micro-electronics and, respectively, information processing and automation, which is leading, for instance, to improved utilization characteristics and greater dependability, is a decisive precondition for the effectiveness of the means of rationalization with regard to their economic, labor-scientific, social, and technological effects. It also determines the speed of expansion, range of application, and the possibility of subsequent utilization of the manufactured equipment. When and which means of rationalization are produced is determined by the material, economical, and time possibilities of the manufacturer and most of all by the benefits to be expected. It is not the

technical and organizational criteria, therefore, which decide on the production structure and the capacities to be created, but the economic benefits to be expected from the employment of the means of rationalization. The benefits should be viewed as absolutely complex in nature. Thus, aside from the savings attained in jobs, work hours, material, energy and costs, possible savings in foreign exchange, increased output achieved by the modernization of existing work tools, labor-hygienic improvements and other factors are also to be assessed. One of the tasks of construction of means of rationalization is also the propagation and promotion of the reutilization and adaption of the own and outside means of rationalization. A decisive factor for the planning, balancing, preparation and execution of the production, the material-technical supply and drafting of the contracts in the construction of means of rationalization is a timely determination of the requirement of means of rationalization, taking sufficiently into account the time element required. In order to secure the unity of the plan, balance sheet and contract, the producers of the means of rationalization must organize in due time and completely their cooperative and contractual relations in an adequate scope relative to the object of performance. The content of the contract relates primarily to the object of performance, the quality, guarantee and guarantee claims, time of performance, price, participating actions of the customer or user, respectively, as well as the supply of individual components and spare parts. Legal security must be brought about under all circumstances, since the potential peculiarities of the means of rationalization (uniqueness and, respectively, utilization for a specific enterprise, manufacture in a subsidiary process) may have legal consequences. For example, guarantee obligations of the manufacturer for one-time products must be explicitly agreed on; supply obligations of the manufacturer for spare parts and customer service are bound to those enterprises of means of rationalization manufacturing the means of rationalization as a specialized production, etc. The manufacturers of means of rationalization are also responsible for the commissioning of their products at the user (see work stage R 8). This responsibility includes first of all:

- the instruction and training of assembly and operating personnel;
- active assistance, e.g., by making available experts and special tools, during construction or assembly,
- the technical-organizational assistance during periodic controls, including the working out of operating instructions, maintenance instructions, spare part catalogs, making available test equipment, etc.,
- the delivery of special spare parts and subassemblies,
- winding up of guarantee obligations.

This caretaking activity is not yet sufficiently exercised by all manufacturers of means of rationalization. The maintenance of equipment manufactured and used in the enterprise is directly a component of the rationalization of the enterprise and subject to the internal economic accounting of the enterprise.

The customer service activities for other enterprises deals with merchandise and has to take into account legal bases. Services for caretaking are included in the price of the means of rationalization or are charged separately. The caretaking is therefore a constituent of the production and thus effective on the earnings. The benefit of the means of rationalization must be seen in its complex and social relation which is significant both for the economic assessment of the means of rationalization produced and also for the derivation of demanding tasks for the construction of means of rationalization. In the combines and enterprises, the cost-reducing relative release of manpower and relative saving in material resources no longer has priority. Important is the absolute release of manpower and jobs, as well as the absolute saving of materials and energy because these will affect directly the qualitative and quantitative availability conditions in the socialist economy. This involves the potential reemployment of:

--manpower for a more effective utilization of time of fixed assets determining the efficiency,

--manpower and the material resources for the quantitative further development of the means of rationalization,

--manpower and the material resources for the production of qualitatively first-rate consumer goods.

The economic effects of the construction of means of rationalization can be reflected by ratios of efficiency. On the basis of the general relation economic benefit effect to 10^3 marks of means of rationalization produced specific magnitudes of efficiency can be derived which unequivocally quantify the economic effect. The effects attained by the means of rationalization in the own combine or enterprise or the national economy, respectively, are to be substituted as economic benefit effects, for instance manpower released, savings in work hours, reduction of prime costs, export earnings, etc. Social and other effects can be represented in the same way. Indicators are, for instance:

$$F_{AK} = \frac{AK_f}{AK_r} \quad (1)$$

with the expansion trend

$$\frac{AK_{f1}}{AK_{fo}} > \frac{AK_{r1}}{AK_{ro}}$$

$$F_{AZE} = \frac{AZE_e}{AZA_r}$$

with the expansion trend

$$\frac{AZE_{e1}}{AZE_{eo}} > \frac{AZA_{r1}}{AZA_{ro}} \quad (2)$$

$$E_{RM} = \frac{IWP}{A_{RMB}}$$

with the expansion trend

$$\frac{IWP_1}{IWP_0} > \frac{A_{RMB1}}{A_{RMB0}} \quad (3)$$

F_{AK} Release quota for manpower

AK_f Manpower released by the employment of means of rationalization in VbE (abbreviation unidentified)

AK Manpower released in the construction of means of rationalization in VbE

F_{AZE} Savings quota in work hours

AZE_e Savings in work hours by employment of means of rationalization in 10^3 amp. hours

AZA_r Expenditure of work hours in the construction of means of rationalization in 10^3 amp. hours

E_{RM} Effectiveness of the means of rationalization (here in relation to the production of industrial goods)

IWP Growth of industrial production of merchandise in 10^3 M

A_{RMB} Size of expenditures in the construction of means of rationalization (e.g., prime cost or manpower or fixed assets)

Index 0,1 before, after the rationalization

The relations (1), (2) and (3), and other derivable indicators are to be formulated as standard values. An economic assessment of the construction of means of rationalization is possible together with other standardizable quantities, such as the

attained production of goods in

the construction of means of rationalization in 10^3 M
number of designers in VbE = 80.

As in all production sectors of the socialist production it is also accessible to rationalization. For this purpose it is necessary to advance in the future primarily the qualitative development of its inherent intensification factors.

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ECONOMY

GERMAN DEMOCRATIC REPUBLIC

FOOD-PROCESSING INDUSTRY TO USE ROBOTICS, MICROELECTRONICS

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[Article by Wolfgang Bunzel, engineer, Department of Science and Technology at the Ministry for District-Managed Industry and Food Industry, Area of Research and Development]

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[Text] Bases of the Further Increase in Effectiveness and Output in the Food Industry

The resolutions of the 10th party congress of the SED and the basic orientations, especially those given at the 10th conference of the Central Committee of the SED require that during the development of the food industry during the period from 1986 to 1990 the intensively expanded reproduction is carried through consistently by way of comprehensive intensification. The demanded increase in output can only be achieved by targeted scientific-technical measures. Above all, new technological solutions are to be realized in connection with the reconstruction, modernization, and complex rationalization of the fixed assets and the better utilization of their capacity, the employment of microelectronics, robot and biotechnology for increased automation and a rapidly rising self-generation of means of rationalization. The production of means of rationalization must be increased and thus the material-technical prerequisites be created in the enterprises for equipping the entire production area with the latest technology. Additional reserves of effectiveness are to be opened up with the introduction of these new technologies and the modernization of the existing fixed assets. Extensive and complex intensification and, respectively, rationalization measures in the enterprises of the foodstuff industry from the basis for this increase in effectiveness, the increase in work productivity, and the necessary increase of the technological level. The socialist rationalization in the enterprises should be concentrated on selected centers of the intensification, i.e., new processes and technologies are to be made effective within shorter periods for production and efficiency on the basis of domestic materials, and connected technological processes be automated in order to accelerate the entire production process and to make it more effective. Proceeding from the central points established in the processing concepts, measures are to be undertaken, such as the following:

- accelerated application of microelectronics and robot techniques;
- the modernization, rationalization and the flexible and complex automation of basic technologies and equipment;
- application of microelectronics for the rationalization of the production preparation and control of technological processes;
- specific application of microelectronics for the production and as a component of consumer goods and goods profitable for export;
- short-term rationalization of the production of quality products for the domestic market and for export on the basis of domestic materials;
- efficient utilization and, respectively, savings of imports, energy, raw materials and materials;
- energy-economical rationalization and processing of secondary raw materials;
- rationalization of the manufacturing of consumer goods;
- rationalization of the transport-, transshipment-, and storage-processes, as well as management and administrative processes.

The increased output and effectiveness, as well as the extensive use of scientific-technical progress require primarily an accelerated modernization and reconstruction of existing technologies, equipment and plants.

Demands on Rationalization and Modernization of Foodstuffs Industry

Modernization is the central point for the structure of the means of rationalization and, respectively, the entire scientific-technical development. It comprises, according to the increasingly complex character of the socialist rationalization:

- not only individual work places, but to an ever increasing extent interconnected work processes, production sections and areas, as well as entire enterprises;
- besides the main production processes more and more also production aid processes and the preparation of production;
- reconstruction with the objective of a complete technical and organizational conversion of entire departments or areas by new technologies.(1)

The modernization is to be planned and executed as a close connection of rationalization investments on the part of the enterprises and of general repair work. As the main form of the reproduction of fixed assets, a significantly higher scientific-technical level is to be attained through the modernization of the existing fixed assets. The scientific-technical progress

is to be made effective in the short term from the production and economic aspect, in order to increase the efficiency, utilization and lifespan of the fixed assets. The results are evaluated according to the success of the combines and enterprises in attaining an increase in the effectiveness of the material-technical basis by means of modernization and in utilizing simultaneously new scientific-technical realizations without any delay. The experiences gathered in the key enterprises of other branches of industry make it clear that the following tasks must be realized before all others in the modernization of fixed assets:

- the complex automation of technical processes;
- the increased application of microelectronics and thus of a qualitatively new stage of automation;
- complex employment of industrial robots for the rationalization of entire production sections;
- rational employment and, respectively, expansion of the available technical processes, so that the multi-machine operation and the multi-shift operation can be realized and expanded;
- increase of the output capacity of the plants and of individual special machines, i.a., by installing a microelectronic control or equipment and, respectively, a coupling with robot technology.

The realization of these tasks guarantees a constant and necessary increase in the degree of mechanization and automation. The growth in effectiveness attainable by the combined action of modernization and socialist rationalization is determined decisively by the means of rationalization produced in GDR production. The measures cited should be made production-effective without delay in the interaction by measures of the scientific organization of work. They are thereby to be directed towards a further improvement of the work and living conditions of the workers, most of all by reducing work impediments and redesigning the work places. The existing research and development tasks are to be examined under these aspects with respect to an increase in output and effectiveness. It is hereby not helpful to insure only a complete reduction of the plan indicators, but concrete scientific-technical measures must be stated for the realization of these objectives.

In establishing new research and development tasks, work with specifications must be considered to a greater extent than has been the case heretofore. The demands on the specifications must take into account the highest state of the world in science and technology and serve as a measure for the future development of quality and effectiveness in the enterprises. The central points of the scientific-technical development of the foodstuff industry characterized by automation and socialist rationalization are as follows:

1. the target-oriented reconstruction of existing technologies and their production facilities with the objective of increasing the effectiveness by a reduction of losses in raw materials;
2. the effective extraction and processing of domestic raw materials for new products according to modern processes (e.g., the fluidized solids technique, extrusion process, and freeze-drying);
3. the development and construction of special plants for the utilization of biological processes, primarily for increasing the yield in raw materials, as well as for the production of certain raw materials and additives (for instance fragrances, gratification acids, yeasts, enzymes, and microbial polysacharides);
4. the accelerated mechanization of the transport, transshipment and storage processes;
5. the assembly of automatic packing lines, especially by the coupling of individual, collective and transport packing techniques;
6. the development and assembly of completion facilities, especially for the beverage and baking goods industry;
7. the development and application of complex process solutions for the reduction of the specific energy expenditure and for extensive utilization of secondary energy;
8. the automation of cooling, pasteurization, sterilization, and baking processes with the objective of saving energy and increasing quality;
9. the automation of weighing and dosing processing through the following:
 - introduction of rapid determination procedures for raw material analysis,
 - precise dosing of individual components,
 - transition from weighing of samples to volume control of each individual package,
 - control, balancing and accounting of material flow with objective of avoiding over- and under-dosing, improving the process management, assuring an even quality, saving in material and permitting exact accounting for every shift.

Standing in the center of additional automation are thereby rationalization measures for those production processes in which, besides savings in man hours, there is the possibility of better utilization of raw material, of reducing losses conditioned by technology, consumption of energy and auxiliary material, an increase of quality and the automation of auxiliary production processes.

[Text] Necessity and Central Points of Complex Rationalization

Frequent changes in the assortment are necessary in the foodstuff industry and economy so as to assure the supply of the population according to demand. It is necessary for this purpose to equip and, in part, to retool the facilities in such a way that the flow of production can be changed in accordance with required technology. With certain assortments, production sections will be interrupted as a result, and manual labor and transport will become necessary. These ineffective measures reduce the degree of production organization. Mechanization, rationalization and automation, including industrial robot engineering must, therefore, be carried out with continuous and also discontinuous production, in connection with technological, structural, and production-organizational rectifications. Certain basic procedures and, respectively, technologies are applied in the enterprises of the foodstuffs industry. As a result of the variety of products, several variants of technological procedures and cross-sectional technologies are included among these procedures. As a basis for further scientific-technical work, a unification of basic processes and technologies towards type-technologies is to be carried out. A prerequisite for establishment of automated production sections is the target-oriented, complex rationalization, connected as a matter of priority with the scientific-technical further development of selected, characteristic type-technologies. However, auxiliary and secondary processes are not to be disregarded since they have an influence overall. Although the conditions for use of a robot and thus release of labor forces are more complicated in these processes, they also are more compelling and rewarding. By employing the latest state of the art, especially in highly productive facilities, it is to be assured by coordination with the areas of scientific labor organization, production and others, that workers are employed for their operation, maintenance and repair who have the necessary technical training or to whom the required expertise, know-how, and skills is conveyed by appropriate steps of qualification. These problems should be included increasingly in measures of training and advanced education. The possibilities provided by the socialist engineering organization are to be utilized especially in this respect.

Fundamentals and Aspects of Further Employment of Industrial Robots and Microelectronics

The accomplishment of these special scientific-technical tasks in the foodstuffs industry requires the reviewing of plans for science and technology for 1986, as well as the national economic plan from 1986 to 1990, demanding qualitative and quantitative changes in the structure of the means of rationalization, maximum utilization of existing solutions, coordinated organization of multiple production of the means of rationalization and many others. To assure availability of means of mechanization and automation for specific branch of industry, appropriate capacities for construction of means of rationalization were created in the combines of the foodstuffs industry. It was thus possible to increase the production of means of rationalization from 1980 to 1984 by almost 300 percent. An even seven-fold increase was attained during the same

period in the Combine Foodstuffs and Coffee. The VEB Machinery Construction Nossen, for instance, developed in only 18 months in cooperation with various partners a fully automatic net-band baking oven with a 25-percent higher output and transferred it to the production line. The following are to be emphasized, i.a., from other combines: steep packing line for canned fish and the plant for production of zwieback developed jointly by the PR of Hungary, the CSSR and the GDR, which provides consumers effectively with supplies from the factory in Berlin-Marzahn. This plant undertakes for the first time continuous preparation of dough for the production and, respectively, cutting of oven-warm, fresh zwieback and also the automatic apportioning of zwieback slices up to the palleting of collective packages. At a saving of 16 workers per production line compared with the international state of production, 5,200 tons of zwieback can be produced annually. The focal point of future work with respect to content is directed towards creating scientifically assured bases for employment of industrial robots. The entire production process is to be included in the determination of effective areas of utilization, whereby, i.a., the following factors of influence are to be taken into account with different evaluations:

- concentration of work places,
- frequency of manual manipulations,
- physical exertion,
- psychic stress,
- social conditions,
- effectiveness,
- national economic requirement,
- expenditures,
- period of realization, and
- possibility of realization.

The respective scientific-technical facilities and institutions must participate in solving this task. For this reason, scientific-technical construction and projection groups must be strengthened. The highest degree of efficiency can be achieved only if the unity of projection, development and construction, of technology and production-technical facilities, as well as of the direct manufacture is guaranteed. According to the basic strategy of accelerated automation, the predominant part of available industrial robot technology and microelectronics should be applied in selected enterprises of the respective branch of the foodstuff industry and reusable automation solutions be designed for other enterprises. An effective employment of robot technology includes also the completion of basic robot equipment which consists, i.a., of adapted

sensor and gripping elements. Frequently, the peripheral facilities determine the effectiveness of a new investment or modernization. In the development or preparation of employment of industrial robot technology in the foodstuff industry the typical character of a continuous mass production in form of continuously working flow lines must be taken into consideration. Certain production technologies appear to exhibit in this regard a technologically optimal performance. A specific increase in effectiveness of these processes is possible if the robot technology, after systematic preparation for its employment, is integrated into the production process in such a way that planned technical and economical parameters are reached immediately after its start of operation. Automation is of decisive importance where new principles of action are put into practice and work difficulties are eliminated. In the introduction of the latest technologies all efforts should be directed towards a computer-assisted process from projection and design to manufacture. It is necessary that feasible automation is worked out for new solutions already with the design of machine-engineering and process-engineering solution, and that the latter is a solid component of the overall task. Examples in this respect are the following: introduction of the extrusion and fluidization process or introduction of new biotechnologies for the manufacture of fragrances, flavoring agents and enzymes. Observations of effectiveness have clearly shown that now as before a number of enterprises of the foodstuff industry have devoted themselves insufficiently and not with necessary consistency to the employment of industrial robots, to microelectronics, and thus to problems connected with it. Moreover, a specific preliminary research is nonexistent. For this reason, the special requirements for an effective employment of industrial robots must be established definitely for the entire foodstuffs industry and individually for every area. The consistency of the substances to be processed from solid to liquid state with all conceivable intermediate stages alone shows clearly the variable conditions relating to production-, machine- and process engineering to be taken into account. An efficient preparation of the employment of industrial robots requires an exact analysis of all process sections and stages. Attention should be paid in this respect to the fact that problems will occur frequently during the transfer of intermediate products from one production section to the next. Conventional starting points must be overcome especially in this regard in order to attain complex changes by means of industrial robot technology and, respectively, microelectronics with the objective of producing foodstuffs in a more efficient and effective manner. In the centrally managed combines of the foodstuffs industry the average degree of mechanization is 65 to 75 percent and the average degree of automation 19 to 44 percent. It is indispensable to eliminate these differences in level as quickly as possible. Examples of the application of industrial robot technology and microelectronics show clearly reserves. They demonstrate that in the foodstuffs industry too one has to change over from development and production of individual means of rationalization to preparation and realization of complex rationalization solutions. It is necessary for this purpose to establish methodically a close connection between research, development, production of means of rationalization--including robot technique and microelectronics--and the execution of investments.

Prerequisites for an Effective Employment of Industrial Robots

The following aspects must be given priority consideration in the creation of the basic prerequisites for an effective employment of industrial robots in the foodstuffs industry:

- thorough technological preparation of employment, starting with an exact analysis of the technological processes;
- connection of robot employment with modernization of existing fixed assets,
- securing complex technological solutions including production stages arranged before and after employment of robots, oriented towards a three-shift utilization,
- concentration on labor-intensive processes,
- analysis of technologically justified technical requirements on the employment of industrial robots and the peripheral equipment to be produced.

The present state of the application of industrial robot technology makes it necessary to concentrate the scientific-technical work on utilization of existing technical solutions from the robot-manufacturing and, respectively, utilizing areas of national economy for the foodstuffs industry. A high growth in output and effectiveness also assumes an increase of the own production of industrial robots. The following objectives should be attained in the development and manufacture of process-flexible and process-specific industrial robots:

- a maximum payback period for one-time expenditures of 3 years, and
- a release of labor forces by technological industrial robots (3..4 VbE/ industrial robots), by charging robots (2.5 VbE/industrial robots), and by process-specific industrial robot techniques (1.0 VbE/industrial robots).

At the center must be the new and further development of the process-specific industrial robot technology with maximum use of standardized subassemblies from the existing and developing modular systems. The increase in work speed is hereby attaining great importance. The following are needed as a matter of priority in the foodstuffs industry:

- loading manipulators for flat bread, cookies, zwieback, pudding;
- bottle inspectors;
- bottle packers and unpackers;
- palletizers, pallet hoopers, pallet manipulators;
- folding box erecting-, closing- and sealing-manipulators, and
- cover and cup packing manipulators.

As a matter of priority, a standardization of the engineering and series production is to be carried out for the combines of the baking goods and beverage industries. Type solutions have to be applied for this branch-specific industrial robot engineering by multiproduction. The combines and enterprises are to select from the central manufacturing industrial robot system solutions (basic and peripheral equipment) capable of modulation at favorable cost. The scientific-technical strategy should be directed towards the development and production of flexible solutions of industrial robot systems of the second generation (with sensory recognition systems), focusing on the increased application of microelectronics. New demands should be made on enterprises producing the means of rationalization both with respect to multi-production of certain structural components and the establishment of efficient software capacities.

Development and Availability of Suitable Process Instrumentation and Control Engineering--A Prerequisite for Automation and Employment of Robots

The demand for accelerated automation and production processes in the foodstuffs industry is linked to increased demands for the availability of suitable measuring instruments. Only the latter make possible the effective employment of industrial robots and other newly developed engineering. The demand for efficient and reliable measuring devices, including sensors, is therefore gaining in importance with the accelerated demand for information on the technological processes. The most important process quantities of the foodstuffs industry to be gathered are:

--temperature, volume flow, level of filling, mass, moisture, and viscosity.

A variety of specific quantities relating to products and processes are to be gathered additionally. For this reason, the foodstuffs industry requires measuring devices requiring sometimes high development and production costs, while often needed only in relatively small numbers. With adequate knowledge of the process it is possible, however, to gather special quantities indirectly with the aid of other process quantities. A lack of process knowledge and insufficient information on the applicabilities of industrial robots, the peripheral equipment, the sensor engineering, etc., are frequent causes of automation progressing too slowly or for a lack of results. This applies in particular if robots are employed individually. Included in the centralized control of production by means of microelectronics must be those technological sections which assure optimization of the mode of operation of both the individual units and the entire facility, thus guaranteeing overall the highest economic effect of the production. The new tasks can only be solved by improved control and computer technology permitting effective control of several objects according to a selected technical-economic criterion. This involves realization of the following:

--centralized control in the automatic regime of the technological process according to individual parameters;

--operative calculation of the technical-economic production parameters with variable periodicity;

--program and logical control of the technological lines and units, including the industrial robots;

- calculation of the values of the control facilities, transfer of these values to the respective regulating contours and transmission to the industrial robots;
- control of the technological course in the individual production sections and in the overall production;
- calculation of the consumption of the energy sources and of the production output according to production types and in different time intervals;
- analysis of production supervision, correction and transmission of recommendations to the operator for the control of the technological processes;
- calculation and transmission of the operative and plan tasks for individual jobs;
- analysis of the down time of technological equipment;
- formation of qualitatively homogeneous batches of raw materials during storage and issuance for processing;
- controls of the desired value for filling and emptying of silos and containers;
- balancing of shift results.

The following variation possibilities are offered, e.g., by the employment of modern computer technology:

- . dosing controls for component scales,
- . batch controls for filling silos,
- . recipe controls for scales,
- . program controls for mixers,
- . limit value controls for temperature, pressure, level, rotational speed, etc.
- . flow measurements for fluids,
- . position controls for control valves,
- . change-over facilities with limit value monitoring for various measured values.

The principal trends of the development of microelectronics and microcomputer-technology are oriented towards expansion of their functional possibilities, the improvement of technical characteristics, the simplicity of utilization, the reduction of costs, the increase of functional efficiency, and the solution of compatibility problems.

Final Remarks

From 1981 to 1984 about 450 industrial robots were employed in the foodstuffs industry, 95 percent of which are process-specific robots, with 67 percent of them manufactured in the combines of the respective branch of industry. The number of workers released by them is considerable but does not meet as yet the specified parameters. Still too high is also the overall expenditure for the use of industrial robots. By 1990 the number of industrial robots is almost to be doubled compared to the period of 1981 to 1985. For many areas of the foodstuffs industry the process-specific robotics is adequate and can be justified especially also from an economic aspect. As the international technical development in this field shows, only robots of the second and third generation make it possible, however, to open up new effective areas of application. Intensive work is carried out in many countries on industrial robots of the second generation which can be adapted to and, if necessary, recognize the form, position and mass of objects by means of sensory systems and work programs. The long-term production policy must be coordinated with the technical concept of the enterprises. Experiences of other industrial branches in the production with robots are to be examined with a view towards subsequent utilization. A prerequisite for the comprehensive fulfillment of the objectives of the employment of industrial robots is a conceptional and labor-sharing collaboration of all branches of the foodstuffs industry and the metal-processing and machine-engineering areas of the national economy. New technologies and processes are to be conceived in close connection with the product development, so as to guarantee the highest possible degree of processing and utilization of raw materials and energy sources. A concentration of the research and development capacities of these new processes assures an increasing effectiveness of the production process and a stable production quality.

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ECONOMY

HUNGARY

NEW REGULATIONS FOR JOINT ENTERPRISES

Budapest FIGYELO in Hungarian No 50, 12 Dec 85 p 9

[Article by Laszlo Borbely: "A Lure for Capital"]

[Text] Direct capital investment by foreigners in joint enterprises in Hungary has been permitted since 1972. Joint enterprises may be formed also in the productive sphere since 1977. And since 1982, the partners may even choose to operate the joint enterprise in a free trade zone. All this stems from the realization that the expansion of our external economic relations and the openness of our economy necessitate that we employ also the more advanced forms of relations between enterprises, forms under which the partners have a mutual and direct interest in the economic and financial results of their venture, and both sides assume the risks of investment, development and marketing.

Contracts for the founding of more than 50 joint enterprises with a foreign capital interest have been approved so far. Nearly half of these enterprises have been formed during the past two or three years. The foreign capital investment can be estimated at close to 2.5 billion forints or about 50 million dollars. This amount is not excessive, but neither is it negligible. The two Budapest banks operating as joint enterprises account for a significant share of this total foreign investment. Without these two banks, the foreign capital interest is 10 million forints on average, and there are nearly 10 joint enterprises in which the investment reaches or exceeds 50 million forints.

The foreigners contribute primarily machinery, equipment and know-how to the capital stock, and sometimes cash for operating capital. The Hungarian founders contribute mainly real-estate leases and cash to the joint enterprises. Joint enterprises are to be found operating in all main branches of the economy. There are relatively few joint enterprises in the machine industry, and there is keen interest in founding joint enterprises in the tourist industry.

More than a third of the joint enterprises are producers, or they contract out the production to others. The partners have come from more than 15 countries, and some of them are firms of international renown. The growing interest is reflected in that negotiations are now in progress on founding between 25 and 30 joint enterprises, among them an increasing proportion for production co-operation.

There is widespread debate on how to evaluate these statistics. The assessments are sometimes extreme: some people speak of failure, while others feel that there is already excessive "penetration" of foreign capital. In my opinion, we have only taken the first modest--but by no means negligible--steps in this area. A number of factors have contributed to this.

Excessive Caution

Regulation was excessively cautious in the first years and, as usual in such cases, was characterized by overregulation. Foreigners did not find this very attractive. There were a good many restrictions (for example, exclusion of the possibility of production cooperation, efforts to maintain a Hungarian majority interest at all cost, etc.) that proved disadvantageous. Initially the tax burden likewise did not favor the founding of joint enterprises, causing potential foreign partners to lose interest.

However, we cannot pass without comment over the fact that the founding of a joint enterprise has been a novel, rather than the accustomed traditional, form of entrepreneurship also for the Hungarian partners, a form involving far more risk. Those who were less accustomed to entrepreneurship found it difficult to fit this greater risk into their own enterprise's development strategy. It appears that the higher profit attainable by founding a joint enterprise did not offset the restraint much.

Today it can already be established that this excessive caution in the first half of the 1970's, in a relatively more favorable international situation, did not make the founding of joint enterprises sufficiently attractive. But thereafter, when the rigidity and unnecessary restrictions of regulation were removed to a large extent, the general investment situation at home was already characterized by the well known curtailment of investments. The enterprises, therefore, could hardly be expected to invest their available development resources in joint ventures. In addition, there were also contributing factors independent of Hungary's intentions.

In the unfavorable world economic situation, foreign firms made productive capital investments abroad far less frequently than before. Their reluctance to invest abroad could be offset only when the investments provided access to very substantial markets and were very profitable. The worsening international political climate also added to the investors' lack of confidence. These are objective factors that must be taken into account even when foreigners justifiably criticize the slow decision-making of their Hungarian partners, the complex and time-consuming official procedures, and the minor, often irritating, factors that complicate everyday business activity (the availability of office space or telephones, for example).

But the regulations pertaining to joint enterprises, respectively the conditions for their operation, have several elements still in effect that--as experience indicates--are unambiguously clear, faithfully reflect the domestic intentions, and are looked upon favorably by foreigners as well. Thus the partners are free to choose among several legal forms (primarily between the corporation, and the limited liability company) that are internationally known and accepted, and determine the founders' rights in managing the business.

Legal Guaranties

Furthermore, the foreign partner is guaranteed by statute the right to convert into hard currency, and to repatriate without any restrictions, his share of the profit; and that the Hungarian National Bank will reimburse his loss, up to the amount of his investment in the partnership, if the loss stems from any action by the government. Thus the repatriation of profits is not a question of ad hoc deliberation and approval; it is an inalienable right acquired at the time when the joint enterprise was founded. A by no means negligible advantage is the form of taxation and its simplicity: the joint enterprise pays only a profit tax on its profits, and is not liable for any other tax or payment to the state budget. (It is an entirely different matter that many people dispute the justification of the tax rate, which is 40 percent at present.)

What can we expect of the founding of joint enterprises in the second half of the 1980's, respectively of the intensification of such activity?

First, we can expect the joint enterprises to help raise the national economy's technical and technological level, and to aid the influx of advanced equipment and technology. In such a form that cooperation with the foreign partner will become a lasting and mutually advantageous relationship, giving him an interest not only in his own export and investment, but also in further joint research and development, and in the sharing of research results.

Secondly, we expect the joint enterprises to contribute--through their founding, operation, and day-to-day business practices--toward the mastering and spreading of modern management methods, high work standards, modern organization and industrial engineering techniques, and management's entrepreneurial approach. All this can have a favorable influence on the activity of not only the joint enterprise, but of the Hungarian partner enterprise as well.

Thirdly, we expect the joint enterprises to help improve the national economy's ability to export, primarily to expand export denominated in convertible currency. This remains an important objective, one that is neither a secret nor something to be ashamed of. In the hope of higher profit, the foreign partner is expected to help the joint enterprise essentially to additional export, through his marketing experience, organization, and connections. Already the modest initial experience confirms that the most advanced marketing and trading methods can be learned under this form as well.

Finally, in addition to the other objectives, it is obvious and by no means negligible that the founding of joint enterprises enables us to attract foreign capital investment, to increase the amount of resources available for development, without simultaneously adding to our foreign debt. The additional import that the influx of capital makes possible represents a plus from the viewpoint of our equilibrium, because our foreign indebtedness does not increase. And as several examples have already demonstrated, the founding of joint enterprises can make new sources of bank credit available, with the foreign partner's co-operation and suretyship.

I hesitate to estimate the amount of foreign capital investment that will probably be attracted under the 7th Five-Year Plan, but I share the view that the

interest in such investments can be expected to be significantly greater than at present. But I wish to add that all this, although important and no longer negligible, will be essentially supplementary activity in our plans for economic development.

Confidence-Building Measures

To achieve our objectives, however, we must not only want to expand the activity of joint enterprises, but must comprehensively further improve the material and financial conditions for the founding and operation of joint enterprises, by continuing the series of confidence-building measures.

To this end, a good many new regulations will become effective as of 1 January 1986. They are intended to provide more incentive for the founders, and hence for the foreign partners. Through significant tax concessions, the tax burden on the investments is being reduced, and the profit from producer enterprises or in preferential areas is being made more attractive.

If the capital stock is over 25 million forints and the foreign interest is more than 30 percent, for example, the tax on the net profit of joint enterprises engaged in commodity production, and of jointly built and operated hotels, will be only 20 percent during the first five years, and 30 percent from the sixth year on, as opposed to the 40-percent tax rate at present. If 50 percent of the annual profit (but at least 5.0 million forints) is re-invested, the joint enterprise will be able to claim a 50-percent tax refund. If the joint enterprise reinvests the entire annual profit (but at least 10 million forints), the tax refund will increase to 75 percent of the tax paid.

In the course of drafting the 7th Five-Year Plan, and for the first time up to now, a list has been compiled of the preferential areas where--in close conjunction with the plan's expectations and the investment objectives--additional tax concessions may be granted, even higher than the general one. The joint enterprises in these areas will not have to pay any tax during the first five years, and only a 20-percent tax on their profit from the sixth year on.

An important element is that all these tax concessions can not only be claimed separately in each case, but the statutory conditions that must be met to qualify have been promulgated in advance, and therefore the partners can rely already at the time of founding on getting the tax concessions.

There is also a statutory regulation that allows a five-year deferral of the customs duty on the equipment that the foreign partner provides as a part of his capital investment. Thus the customs duty is not charged to costs in the initial period.

Licensing Faster, More Simple

To reduce red tape and the restrictions on business activity, licensing will be considerably faster and more simple as of 1 January 1986. The two-stage licensing now in effect will be replaced by one-stage licensing: the present requirement of applying for permission to negotiate, and of holding a hearing on

the application, will cease. The enterprises will first file a notice of intent that presents their plans in detail. If it is not rejected within a very short time (30 days), they may go ahead and prepare their application for permission to establish a joint enterprise. This application will be considered in one round, at a time when all questions pertaining to the founding of the joint enterprise have already been clarified and the contracts are ready for signing. Naturally, all this increases the enterprises' independence and responsibility, and reduces official interference.

The regulations on accounting and statistical reporting have been simplified, and the procedures for registering the joint enterprise with the registry court have been streamlined. The new regulations wish to resolve several unnecessary restrictions on business activity.

The conditions for founding joint enterprises must be improved also through international agreements that give foreign investors more confidence. Agreements to protect investors are being negotiated with several important Western countries. International agreements on avoiding double taxation are, or soon will be, in effect with most of the developed capitalist countries. In many instances the application of these agreements reduces the foreign partners' effective tax burden.

The foreign partners' willingness to found joint enterprises is influenced to a large extent by the size of the market in which the joint enterprise will be able to sell its products. From this point of view, Hungary alone is not very attractive, but the possibility of exporting to the other CEMA countries offers much bigger potential profits. Harmonization of the different market conditions has not been solved institutionally as yet, at least not in a way that would satisfy the interests of all the parties simultaneously. However, the experiences within CEMA and the practice of economic relations with the capitalist countries indicate that specific practical solutions can be found in some instances.

I would like to call attention to the fact that not merely the foreign partner but the entire joint enterprise--and, in the final outcome, also the Hungarian partner--enjoys the mentioned benefits, especially the tax concessions. When formulating their development concepts, therefore, it is worthwhile for the enterprises to consider also this form of cooperation, in view of its greater profitability.

Thus it is in everyone's interest to found and operate profitably in Hungary as many joint enterprises as possible in which a foreign partner has a capital interest. The measures that will soon become effective will contribute to the success of these efforts, and will also stand international comparison.

1014

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ECONOMY

HUNGARY

DECISIONMAKING POTENTIAL OF ENTERPRISE COUNCILS QUESTIONED

Budapest FIGYELO in Hungarian No 51-52, 19 Dec 85 p 5

[Interview with Janos Deak, Deputy Chief Department Head at the Ministry of Industry by Csaba Vertes: "What Kind of Optimism Gives Hope to Responsible Decisions?"]

[Text] The first enterprise councils in industry were formed at the end of May and by early December 131 enterprises switched to the new management methods. 102 companies operate with enterprise council, 10 with general assembly, and 19 with delegate assembly. By the end of the year about 50 more companies will establish new management bodies and this also means that the process has accelerated much more rapidly than planned. To illustrate the importance of the succession of events it is enough to point out that by the end of 1986 more than 80 percent of enterprises under the supervision of the Ministry of Industry will operate through collective management and 60 percent of industrial workers and about 40 percent of fixed industrial assets belong to this group.

[Question] But have the affected parties comprehended the importance of recent events in industry? We had a conversation with Janos Deak, deputy department head at the Ministry of Industry, about the switch and experiences of the new management bodies. His answer to our question can be interpreted in more than one way.

[Answer] I have to emphasize right away that the switch to the new management system is not some kind of self-serving, demonstrative action toward democratization, but a necessary step in the process of improving our economic management. If we do not change our system of institutions, organizational structure, and forms and methods of management and try to overcome our various economic problems by changing only the system of planning and regulators we can hardly achieve our economic goals.

[Question] Your remark also indicates to me that even now perhaps not everybody understands clearly that the executed changes in our system of economic management and the effect of the planned measures would necessarily suffer, perhaps even be blocked, in an unchanged enterprise structure and management system.

[Answer] Indeed there have been debates and there are a number of people who do not exactly understand the essence, goals and meaning of the switch to new management forms. Obviously they do not understand them where the switch was considered a mere formality and handled that way. And obviously they do not understand them where for instance the switch was rushed along because it was perceived to take attention away from production work. I would like to mention that our detailed studies have unequivocally proven that there is no direct link between moderate enterprise output in some places and the switch to new management.

I would like to add that if the switch is executed in a responsible manner the hierarchical dependency of enterprises on institutions of state management will by necessity loosen. Enterprise independence is not obscure and incomprehensible, but has concrete substance as the right to and responsibility for strategic decisions now belong to enterprises. Perhaps what is most important is that ownership function has been thoroughly re-evaluated in the sense that the owner--in the interest and function of the enterprising organization--has to carefully weigh and execute its basic interests. The point is that the owner can have one goal only: to make a profit from the assets that the state entrusted it with. Strategy has to be subordinated to this, the product structure will have to be altered according to it, decisions on technological improvements, money spent on new development programs, loans, etc. will have to be based on it. This is to say that the task facing the management bodies of enterprises is extremely serious and responsible.

[Question] I have to convey the sceptical and suspicious question of many: how can we hope that the relatively populous and of course heterogeneous body will bring professionally sound and reliable strategic decisions?

[Answer] We cannot expect this kind of body to bring binding decisions on definitive issues without proper professional guidance. With this I am emphasizing the importance of decision preparation and the responsibility of those preparing the decisions. But let us return to this later.

[Question] Then let us talk about the experiences of the process of the switch. In the final analysis, why does it not take place according to the agenda, why is the process accelerated?

[Answer] Indeed, only about 65 companies--far fewer than planned originally--will complete their switch only by the end of next year. But the acceleration is only to the extent that circumstances allow. There is no point in hurrying heedlessly as there could be considerable economic and political damage.

I do not wish to detail again the desirable and logically indispensable agenda of the switch. I would just mention that as the first step of company preparation--according to joint directives of the Council of

Ministers and SZOT--the preparing committees had to submit an enterprise opinion on the switch to the ministry. This obviously assumes that the preparing committee does not invent but indeed learns the opinion of the enterprise's workers. It informs the enterprise's collective, gives time for evaluating the details of the events, for debates at the work place, for forming local viewpoints, and later it will collect opinions in a proper manner and will have people vote on the form of self-management, the date of the switch, and possible modifications in the organization. The ministry was interested in these summaries and possible private opinions of the director and social organizations in order to be able to take further substantive steps. This normal process, however, was reversed in some places. The preparing committee forced its pre-established viewpoint on the collective, usually easily and quickly, indicating that these companies do not have very strong democratic traditions. It is also a sign that these companies will not be able to have an effective collective management body if in practice they do not strive for conflicting opinions, learning opposing interests and bringing them in line.

[Question] There have been rumors about a number of companies not agreeing with the ministry's recommendations but being gently and methodically forced to accept ideas from higher places. In other words, it seems as if the ministry itself did not take the rules of democracy quite seriously.

[Answer] I do not know which circles spread these rumors, but I do know--and we can prove this--that 86 percent of enterprises agreed with the ministry's recommendations on the forms of self-management and the date of the switch. 6 percent of them objected to the recommended form and instead of general assembly recommended the formation of enterprise council.

[Question] Is it perhaps because the smaller enterprise council can be handled more easily?

[Answer] According to our personal information it is mostly the opinions of enterprise leaders that are reflected in these objections and counterproposals. That is to say that enterprise leaders may find the enterprise council a more manageable body than the general assembly or delegate assembly that represent wider democracy. I would mention that there have been reverse cases as well. Where the enterprise community had more power to enforce its viewpoint the preparing committee--in opposition to the ministry's recommendation--suggested the formation of a delegate assembly or general assembly.

[Question] To interject, why did some insist on maintaining the old state management system?

[Answer] Because, for instance, they are in a difficult economic situation and thought that until they can work out a satisfying program of stabilization there was no point in changing the forms and

methods of management. Others recommended the maintenance of the state management system emphasizing their own economic importance misunderstanding the basic principles behind the new management forms. With the first group we weighed the enterprise suggestions, but with the second, we upheld our original recommendations. In the end, 45 enterprises, 3 trusts and 3 more companies in the form of a new type of trust have remained permanently under state management. 6 companies remain under state management until an economic reorganization and 247 companies will have collective management.

As far as the date of the switch is concerned, 8 percent of enterprises objected to the ministry's recommendations. Half of them wanted to accelerate and the other half to slow down the process and it is perhaps typical that the "accelerators" only had general reasons to back up their suggestions.

[Question] Still, what were their reasons?

[Answer] Formally, their reasons were attractive and the most typical of them was perhaps that once we reached the turning point of the mid-range plan period a collective management body should decide on the enterprise ideas of the seventh 5 year plan. But in the majority of cases it was clear that they were more afraid of the prolongation of the process, of possible organizational changes, or at least they would have liked to slow down these changes.

[Question] This could be perceived as an effort to preserve the former system of management and organization, but it could also be perceived as a wish for some kind of stabilization.

[Answer] On the one hand, the need for stability is understandable, as long as it has real motives. On the other hand, we cannot avoid internal structural changes which is to say that we have to find an optimal compromise between efforts in the direction of stabilization and demands for change. Also based on practical experiences the ministry has followed the principle that in justified cases it accepted suggestions for both acceleration and slowing down.

[Question] Let us now look at efforts toward independence.

[Answer] Taking advantage of the law 45 units of 36 industrial enterprises have submitted requests for independence. Half of them are based on recommendations by the ministry, and half of them are local initiatives. The ministry judged such requests from two consistent points of view: is the company truly suitable to become independent; what kind of product structure does it have, what is its profitability, is it indeed capable of functioning independently? Also, what consequences will the parent company suffer as a result of the splitting off? Upon thoroughly examining the requests we took the position that 7 companies are justified in their efforts to become independent; 2 companies' requests were denied; and 2 companies, undergoing a

reorganization of finances, will have to solve their organizational problems within this framework; 1 company will switch to a new form of trust with limited jurisdiction; and we recommended subsidiary form for 27 companies provided the interested parties agree. In the final analysis--as a result of further consultations--the establishment of altogether 24 new companies is in process. In the case of 2 companies preparations are being taken to form a trust with limited jurisdiction and the request of others to become independent have been denied, but we asked them to change as necessary their internal management and organizational structures.

[Question] Why is it that the community of the affected enterprises, but even the general public, are primarily concerned with the selection of directors?

[Answer] Perhaps because in many places the entire switch has been simplified to the level of choosing directors. And so they are causing substantial damage because in this way they are formalizing and reducing to one task this complex process that involves managements methods and tasks of organization and interest alignment.

[Question] In the end, what were the results of the selection meetings?

[Answer] In the great majority of enterprises the directors were given a vote of confidence in their positions, and only in 9 companies did they not receive a two-third majority vote. These companies take applications for the director's position. In two instances this has already taken place and at Kner Press the previously rejected director was chosen from among the applicants.

[Question] Voting is secret, is it not? The body's decision does not have to be, indeed it could not be justified. Therefore the motives in voting could hardly be uncovered. Still, what could be the reasons for not giving a vote of confidence to the directors in the places mentioned before?

[Answer] The concrete reasons indeed cannot be uncovered, but based on practical experiences it is possible that for instance unsuitable managerial behavior, a paternalistic attitude or a rigid hierarchy played a role, or a lack of positive publicity to supplement individual leadership programs. Or it could be latent personality differences within management as well as clashes in group interests stemming from a poorly or not at all functioning mechanism for interest alignment. All of these are enough individually for management bodies to withhold a vote of confidence for the director, but more than likely we have to speak of a combination of reasons, and in addition the preparatory work for elections was not of high quality either.

[Question] What happens in the transition period, until the new director whose application was accepted takes his position? And what will happen to those who were not elected? What are their conditions of withdrawal?

[Answer] First of all, they do not have to withdraw. They may apply as well. Not only for their old job, but for new ones too. In case they take a job with another organization they are entitled for 6 months to the difference between the new and old base salaries or they may receive severance pay equivalent to 6 months' average income. But under suitable conditions the ministry may initiate the person's retirement before normal retirement age.

Incidentally, until the new director who was hired based on his application takes his position everybody stays on the job. It is another matter that during the long months of the process the cooperation between the director and the collective management body is not going to be easy.

[Question] At the beginning of the conversation we left the question unanswered whether the quite heterogeneous management bodies can be trusted with the responsibility of bringing strategic decisions.

[Answer] This has a strict and binding system of conditions. First of all we have to realize that good decisions are only possible if the managing bodies, representing very different groups, come to an agreement on the most important goals of the enterprise. Furthermore it is necessary that all the important connections related to the tasks to be decided upon be known to the members of the body, and of course, that they be able to choose from among opportunities and variants. Second, we have to realize that collective management and decisions cannot be restricted to just member participation at meetings. This means that a basic premise is that members of the enterprise council be continuously informed about enterprise processes and their details falling under the jurisdiction of the enterprise council which of course assumes the adequate establishment of an information system and its smooth functioning. Without these conditions the managing bodies can only bring unfounded or formal decisions. Of course it is also possible than in a case like this no decision will be made. But then the decision making process will be drawn out because the poorly prepared item will have to be put on the agenda again and again. And third, we also have to realize that--particularly in the initial period, but also continuously--the members of the managing bodies will have to be trained. Partly through the systematization of available training courses, and partly--and this is just as important--through internal situational analyses, consultations, and "dry runs." Most companies pay very little attention to this, at best they are satisfied with training programs or decisions to have them.

I repeat, the complete establishment of this system of conditions is essential, because without it managing bodies can be trusted with the task and responsibility of strategic decisions only formally.

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ECONOMY

HUNGARY

MANUFACTURING AGREEMENT WITH CHINA

Budapest FIGYELO in Hungarian No 50, 12 Dec 85 p 9

[Report by E.M. under the "We Just Heard" rubric: "From Laszlo Hosser, Deputy Director of the Videoton Corporation: Production Cooperation With China"]

[Text] We established contact with China's foreign traders in 1977, when a Chinese purchasing mission in Hungary was studying the feasibility of importing various consumer goods, particularly electronic equipment. The purchasing mission inspected also the production of television sets in Hungary. Shortly thereafter we made an export offer and received our first order, for black-and-white TV sets, table models with a 24-inch screen. We shipped 10,000 of these sets in 1978.

The idea of entering into production cooperation arose thereafter. While we stabilized our trade, joint production also began: we supplied so-called kits for black-and-white sets (the kits include all the subassemblies, components, the cabinet, etc.), and the sets were assembled in Chinese assembly plants. We cooperated in this by providing suitable technical assistance. We exported 45,000 TV sets in 1979, and thereafter the number of sets varied between 60,000 and 80,000 a year. Over the years we usually sold assembled sets and kits in a ratio of 1:1.

Contrary to all beliefs, the technical standards in China are very high, and there is very stiff competition. At present, for example, 30 Japanese firms are marketing consumer electronic products in China, and some of these firms have set up local assembly plants and component-manufacturing enterprises. Up to now Videoton has been able to stand its ground in the stiff competition. For 1984 we agreed to ship also 2,000 color TV sets, table models with 22-inch screens, in addition to the black-and-white TV sets and kits. The trial shipment won the Chinese partners' approval, and for 1985 they ordered 52,000 color TV sets, while our export volume of black-and-white sets and kits remained unchanged. We have begun to ship also color TV kits, for local assembly. China's television system differs from ours, but this does not cause a problem in such a large series.

We held talks recently with our Chinese partners regarding our 1986 export. We have received indications that for next year they would like to expand their import of color TV kits, and we are ready to supply their increasing requirement.

1014
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ECONOMY

HUNGARY

PRELIMINARY RESULTS OF FARM INCOME REGULATION

Budapest FIGYELO in Hungarian No 51-52, 19 Dec 85 p 23

[Article by Jozsef Huszar: "Farm Income Regulation: After the Honeymoon"]

[Text] A number of experimental models have been used to regulate agricultural cooperatives' income. 1985, however, has not merely been a year of experiments. Several methods have become practice.

Although we do not have final data on their success, already we are able to point out some interesting tendencies.

Reclassified Economies

The fact that in 1985 only 10 cooperatives have gone out of business shows a high degree of organizational stability. This is all the more interesting because among others in 1985 plants and cooperatives with unfavorable conditions had to choose from among various forms of income regulators.

But the cooperatives did not have a choice in deciding whether they will belong to the category of cooperatives with unfavorable conditions or not. Therefore independently of this the categorization only motivated, but did not determine the usage of the system of income regulators.

Of the 1279 cooperatives registered early this year 621 plants, nearly half of the cooperatives, were classified to have unfavorable conditions. Since in classifying the exclusive consideration was the gold crown value indicating the quality of arable land 162 cooperatives out of the 621 classified as having unfavorable conditions received extra subsidy in spite of the fact that they had functioned with great efficiency on several years' average. Nearly as many cooperatives tilling land worth more than 19 gold crowns do not receive extra subsidy even though on several years' average they have lost money or functioned with low efficiency.

Income level and economic efficiency are not always in line with the quality of land. This explains why classifying cooperatives into systems of income regulators was motivated not by favorable or unfavorable conditions, but by the opportunity to expand the enterprises' business interests.

Two hundred ninety agricultural cooperatives, 23 percent of cooperatives, decided on income regulators dependent on gross income level. In general, better than average and efficient cooperatives belong to this form of income regulators.

The ratio of cooperatives classified as having unfavorable conditions reached 46 percent in this form of income regulators. This on the one hand indicates that a significant portion of cooperatives with unfavorable conditions--133 cooperatives--found this income regulation advantageous, and on the other hand some cooperatives with unfavorable conditions were of the opinion that along with a relatively low gross income, considering the possibility of a moderate wage increase, choosing this system of business interests was safer.

In 1985 the number of employees in traditional cooperatives deciding on income regulation dependent on gross income level dropped by 5-5.5 percent, but the amount of wages did not practically change. According to this wages per person during the year increased by 5-5.5 percent. It is true that this wage increase--wages per person in 1985 are estimated to be 61,000 forints--are slightly higher than the average for agricultural cooperatives, but the system did not encourage a drastic change in the number of employees and wage level.

The production structure in this area did not change significantly either. A relative lack of risk was assured by this method that made it possible to calculate and adjust to income regulating and year-end prorated taxes.

However, this interest system did not sufficiently encourage a profit increase. In cooperatives belonging to this category profits in 1985 have decreased by 14 percent compared to last year and losses increased by two and a half times.

These cooperatives financed the wage increase through fewer employees and smaller profits. Although their total production costs remained intact, the amount of wage costs did not change significantly. Unfortunately they could not find anything to counterbalance the nearly 4 percent drop in the production value of basic operations.

There were 252 cooperatives, 20 percent of enterprises, which chose income regulation dependent on added value. Of these, 142 cooperatives are classified to have unfavorable conditions.

This form of income regulation was typical mostly of unprofitable cooperatives and those with low efficiency and gross income and this was the method that most strongly influenced the work of cooperatives. For example, these cooperatives lowered their work force by more than 10 percent, double the average. It is also true that paralleling this production decreased by 4-5 percent because joint cooperatives had radically eliminated their unprofitable base and supplementary operations. They wanted to achieve income growth and higher wages at any cost.

It was in this circle that production costs and particularly wage costs diminished the most. As a result they could achieve a higher than average 6.5 percent wage increase. Cooperatives choosing this form of income regulation decreased their losses in 1985 by almost 40 percent, but even so losses are expected to surpass 600 million forints.

In all probability it is this form of income regulation that most strongly stimulates work force reduction, improvements in production structure and cutting out labor and wage intensive operations. In this way this form of distribution, literally forcing economic efficiency, weakens the village's ability to keep its work force, at least in the short run.

Dual Taxation

51 percent of cooperatives, many more than expected, chose large plant income taxation, and 315 of them are plants with unfavorable conditions. Large plant income taxation can be considered a system of income regulators for the mid-range.

Since in this circle the majority of cooperatives pay an annual gross salary of 60-90 thousand forints per person in all probability they chose this form of income because they found the possibility of tax-free income growth attractive. They had faith in keeping the efficiency index--the added value--at level, or perhaps in raising it a little, and thought that this system was most likely to create an opportunity to increase individual interests. In all likelihood this also explains why almost half of the plants choosing the system of large plant income taxation have unfavorable conditions.

Of the three major systems of income regulation this is the one that encouraged work force and production cuts the least. Although the work force was cut by 3-3.5 percent in this group of plants as well, the production value did not change. This means that along with the inevitable 2-3 percent decrease in basic production supplementary activities increased to a small degree. Average wage increases stayed around the average as well.

But cooperatives paid a steep price for these results, as they chose the most tax-demanding system of distribution. It is with this form of income regulation that fluctuations of production and cost increases are the most closely related to pure income centralization.

Tax allowances determined at the base level do not follow profit changes and increases in personal taxes. Therefore the ratio of gross income tax and taxes on wages will increase as a result of a drop in income. In this case we are talking about a double taxation of gross income. This form of income regulation can only live up to expectations if plants operating according to this in 1985 could put a stop to a decrease of a more than 20 percent profit.

The formerly introduced experimental income regulation will end in 83 cooperatives at the end of 1985. By 1986 these plants will have to decide on another form of business interests. The affected enterprises are cooperatives with typically high gross income, as one of the conditions of the experiment was income stability and a high level of operations. Their work force did not decrease by more than 3-3.5 percent. Their production stayed at level, although to achieve this they needed 4 percent more wage money than before and wage level increased by 7-7.5 percent. Their profit for 1985, however, will not reach the 1984 level in spite of the fact that production in 1985, particularly base production, surpassed the previous year's level.

Interests of the Small-Scale Producer

But the income regulating systems only influence production in large plants, although production for large plants is going on in other places as well. For example, various enterprising forms are expanding at a fast rate, and systems of share farming and animal placements are increasing as well. As a result, at least based on data for the first three quarters of 1985, income above wages quickly rose.

In 1985 the Central Bureau of Statistics reported that as a result of labor shortage and economic considerations the areas of labor intensive cultures in large agricultural plants had been decreasing for years. In the interest of stopping this process agricultural cooperatives since 1981 have been using various methods of business interests. Their chief characteristic is that mechanized work is done by the plant and manual labor is provided by the members of the cooperatives with the help of their family members, pensioners, hired hands and frequently small producers and specialized groups also help out.

The vegetable plots on cooperatives' arable land have decreased by 14,000 hectares in the past 5 years, while vegetable plots on arable land rented out and utilized individually have increased by 13,200 hectares. Naturally, land ownership has not changed.

This process of change is even faster with vineyards. During the past 5 years their area has increased by 270 percent, to a total of 3,800 hectares, and this together with household plots, reaches 10 percent of cooperative grape cultivation.

New forms of production are expected to expand in the future, although they are significantly hindered by the new regulators employed with forms of share-farming. It is to be feared that unclear practices of taxation and work force and income calculations as well as the danger of related sanctions will force many cooperatives to give up these forms of production.

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ECONOMY

HUNGARY

CASH INFUSION TO HELP FARMS

Budapest FIGYELO in Hungarian No 50, 12 Dec 85 p 17

[Article by P.B. [Peter Bonyhadi]: "Cash Transfusion"]

[Text] The regulation requiring agricultural cooperatives to block a specified proportion of their development fund served to curb agricultural investment. By the beginning of 1985, more than 2.8 billion forints had accumulated in the blocked accounts of the farms.

A peculiar situation arose! While billions were "gathering dust" in the cooperatives, they owed the state budget billions, for the loans they had obtained to work out of their losses and to offset the deficits of their development funds. Admittedly, such bailouts gave the farms a temporary breathing spell. But the strict credit terms, and the practically complete absence of any opportunity to invest, soon forced some of the agricultural cooperatives back in the red, despite their best efforts. And then the same process began all over again!

The freeing of the agricultural cooperatives' blocked assets seemed--but only in retrospect, of course--the obvious solution to help the cooperatives break this vicious circle. The fact that the cooperatives were able to transfer their blocked development funds to their Mutual Aid Funds (KTA's), as cover for loans to [other] cooperatives, relieved the pressure on the state budget, and for the agricultural cooperatives it meant breathing new life into their blocked assets.

The agricultural cooperatives' nearly 3.0 billion forints in development funds that had been blocked earlier provided an ample cover for the loans.

Regardless of how close their solidarity, of course, agricultural cooperatives do not give their money away to each other. The KTA's, for example, charge 9 percent annual interest on the loans they provide to offset development-fund deficits. The interest payable on workout loans is 6 percent, but repayment of the principal is suspended for 5 years in the case of agricultural cooperatives helped in this manner.

Naturally, the "interest meter" keeps ticking away even during this moratorium. However, the fact that the installments on the principal can wait gives the farms a chance to climb out of the red. But since cooperative assets and

cooperative administration are involved, also the rationalization of the loss-making agricultural cooperatives' farming proceeds differently.

Namely, when the state budget provided the workout loans for the farms, the committee that determined where and what changes would have to be made in a farm's production structure focused its attention mainly on the prospects of recovering the loan. In the final outcome, as has been confirmed in practice, what long-term effects these changes would have on the farm's operation was not a primary consideration.

In the case of the agricultural cooperatives that have been helped with workout loans from the unfrozen cooperative development funds, however, the officers of the KTA--practical farm managers and enterprise financial experts themselves--evaluate the situation of a helped agricultural cooperative and decide its future, when the moratorium on repaying the workout loan's principal has expired.

However, workout loans provided from what in the final outcome are cooperative assets do not mean that the state has been relieved completely of guaranteeing such loans. When the state provided workout loans in the past, for example, a part of the loans could be converted into grants if the specified profit or farming practice was not achieved. This state pledge remains in effect, even when the KTA's take over the loans from the state.

In such cases the KTA's have to take over from the state, with the cooperatives' assets, the workout loans and the loans for offsetting development-fund deficits only when the farms in question have not fulfilled the conditions set for them. And fulfillment often does not depend entirely on the farms themselves.

The total debt of the loss-making agricultural cooperatives, and the total amount of blocked development funds transferred to a KTA rarely show a zero net balance everywhere. In those megyes where the available total amount of blocked development funds is not enough to take over the provided loans from the state, the regional KTA borrows additional assets from the National Mutual Aid Fund (OKTA).

To avoid any misunderstanding, the agricultural cooperatives provide also these additional assets. Namely, each KTA has to transfer to the OKTA 30 percent of the blocked development funds of the agricultural cooperatives on its territory. These transfers amount to 858 million forints. The obligation to transfer is so strict that the KTA's may begin taking over state loans within their own authority only after making the required transfers.

This flow of funds amounts to billions nationally. To avoid temptations--i.e., to prevent the KTA's from providing money from these assets also for other purposes besides taking over state loans--the unfrozen development funds may be used for the time being only to solve liquidity problems.

The time limit for transferring blocked development funds expires at the end of 1985. But the success of these transactions will depend also on how seriously the individual cooperatives accept the principle of mutual aid. Also in view

of the fact that the transferred amounts are not being reallocated but will remain the assets of the KTA's, and in the final outcome of the agricultural cooperatives that transferred their blocked development funds. Thus it is too early as yet to speak of the results of circulating the unfrozen development funds in this manner. However, it seems a clever idea to strengthen the financial stability of the agricultural cooperatives through such an internal transfusion of assets, bypassing the state budget, but without drastically releasing additional purchasing power.

1014

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ECONOMY

HUNGARY

INVIGORATION OF POULTRY INDUSTRY HELD NECESSARY

Budapest FIGYELO in Hungarian No 50, 12 Dec 85 p 17

[Article by Ivan Oros: "Vanishing Opportunities"]

[Text] Hungary's stock of brood poultry has barely changed in recent years. Numerically it peaked in 1982, but the difference between the peak and the low in the 1980's has been only about 10 percent. Incidentally, predominantly chickens determine the development of the poultry stock, and their number has been declining steadily since 1982. The other species of poultry show mostly increases, although occasionally with significant fluctuations.

As a result of the different conditions of keep and different breeding objectives, primarily the large-scale farms supply the poultry for central market allocations. The situation is similar also in poultry export: in 1983 and 1984 the large-scale farms supplied 84 or 85 percent of the total procurement, and they also accounted for 75 percent of the egg export.

Small-scale producers own the major portion of the poultry stock, and they are keeping several million fewer heads of poultry than earlier. The stock of chickens has declined for the same reasons as the hog population: the low profitability, bad weather, feed shortages, etc. did not motivate the farms to expand their production. And, of course, the export prices also are lower.

The statistics on the stock of poultry do not reflect the problems encountered in procurement in 1985. The production of broilers has remained more or less at the same level as in the past three years, but there has been a sharp drop in egg production. More poultry meat could have been exported had the supply been adequate.

The procurement of eggs in the first three quarters of 1985 was down by 27 percent as compared with the preceding year, but it was not even half the procurement in 1981 or 1982. The export of eggs was less than a third of last year's volume, and occasionally there have been bottlenecks even in domestic supply.

The price adjustments that are becoming effective will slightly improve the profitability of poultry farming. With sufficient incentives, production on the large-scale farms can be adapted to the domestic and foreign demand within a relatively short time. Provided the necessary buildings and equipment are available and have not been converted to other use, as often happens.

ECONOMY

POLAND

BANK ACTIVITY IN FINANCIAL POLICY EXAMINED

Warsaw ZYCIE GOSPODARCZE in Polish No 42, 20 Oct 85 p 8

[Article by Roman Rak, member of NBP (National Polish Bank) president's advisory group: "The Enterprise, the Bank, and Others"]

[Text] Presented below are the results of studies on an evaluation of management efficiency in enterprises. They were done in the NBP main office at the time new rules for granting credit to enterprises were introduced in 1984. The studies, which covered a group of NBP branches as well as enterprises to whom credit was being granted, made it possible to define the concept of management efficiency in banking practice. In turn, the enterprises being evaluated were able to express their opinions on the work of the bank giving the credit.

Criteria and Measures

In 1984 NBP Credit Instruction No 1/84 introduced new rules for granting credit to enterprises. The rules also describe the basic principles and criteria in the evaluation of management efficiency and more accurately define the concepts introduced in the law on financial management of enterprises.

During the course of establishing credit eligibility, the bank is primarily interested in financial liquidity and profitability of current operations, and furthermore it wants to know about the quality of management of production factors, the developmental policy being conducted, and the manner in which accumulation is utilized (divided). To protect its liabilities, before granting credit the bank also examines the enterprise's assets, i.e., the value of liquid assets and the enterprise's obligations.

When enterprises operate under conditions of great shortages in the basic factors of production and high inflation, the branch banks, in establishing credit eligibility, apply broader criteria of evaluation of management efficiency than the law provides. The primary ones are: financial results and the principles of division of that portion which is at the disposal of the enterprises, the measure of profitability, minimization of costs and outlays, sales, its directions and rate, size of production and prospects for its expansion, size of employment and wage fund, and utilization of production capacity and capital assets.

In the bank's opinion on credit eligibility , such criteria of efficient management as the structure and amount of reserves, production quality, amount and effectiveness of export, and price policy, were occasionally listed.

It appears from the opinions of the bank branches and the enterprises studied that there is only one universal criterion of management efficiency that is understood similarly in all economic organizations. It is identified with the different elements of the management process which apply pressure to various production factors.

Technical material, and not financial elements in the process of production and sales are an important part, although the criterion of profit (and profitability) dominates. But the banks granting credits point out that the amount of profit in many cases is not the result of measures taken to make production and sales more efficient, but is the result of the high growth of prices.

That is why the measure of profit "verifies itself" through partial measures which relate to the factors shaping the profit. It is not profit itself which becomes the basic criterion, but the method by which it is obtained. This results in a multiplication of criteria for evaluation of enterprises.

Aside from the overall criterion, we have an entire gamut of partial criteria which are often in conflict with each other, or are at least divergent, although, as the bank branches point out, the partial criteria fulfill only an auxiliary function, while the overall yardsticks perform a leading function.

Some bankers say outright that the bank more and more frequently ignores the overall measures of evaluation envisaged in reform, using specific parts of the enterprises' operations for the required evaluations. This is often attributed to the present "temporary economic situation."

But it is interesting that the opinions of enterprises on the bank's expansion of evaluation criteria are not unequivocal. According to some, when the bank, in its examination, goes beyond the problems which strictly relate to establishment of the amount of credit and the guarantee of its repayment, it is interfering in the legally affirmed independence of enterprises, and is therefore in conflict with the principles of reform. Others point out that the bank is the only organizational entity which really evaluates an enterprise thoroughly, involving itself quite impartially in the broad range of economic aspects. And that is what makes bank examinations different from those made by other institutions.

Affecting Conditions

In establishing the conditions on which the granting of credit depends, the bank tries to compel the enterprises to undertake measures which would improve efficiency. In addition to the bank, other participants in the economic process also affect an enterprise's operations. The enterprises adapt themselves to the situation and rank their opinions not according to their economic importance, but according to the objective assessment of importance assigned by the assessing organizational units.

Pointing to the strength and importance of the participants in the management process, the enterprises gave first place on the list to those units which are responsible for distribution of supplies and turnovers, and the parent agencies. These units do their influencing by means of administrative directives (limits on supplies and raw materials, where production is sold, etc.). This has a direct effect on the materials structure and level in the production process. Under this system, the bank's influence (which comes down to regulating the amount of financial assistance), even if the bank examiners are very familiar with an enterprise's circumstances, is not very great.

Management efficiency, judged according to financial results or correctness of structure of operations-financing sources, thus becomes the resultant quantity, which is not taken into consideration in planning the conduct and operations of the enterprise. An example of this are the opinions of enterprises that the bank should adapt credit rules to the present situation as regards availability of supplies, and grant credit to fully cover purchases of raw and other materials in the maximum amount obtainable. The lack of regular deliveries, or guarantee of deliveries, which affects continuity in the flow of supplies in the production process, is used as an argument.

Credit costs, therefore, are completely unimportant, possibly because interest is not charged against profit, but against costs. Enterprise studies indicated the following ranking of goals (beginning with the most important: obtainment of a growth in production, amount of export, execution of annual planned tasks, obtainment of maximum financial results, prevention of a drop in production and employment, obtainment of a growth in wages for the workforce, and obtainment of high profitability.

Almost half of the enterprises gave first place to execution of planned annual tasks and growth in production, while only 10 percent ranked maximization of financial results first, and only 3 percent gave improvement in profitability first place. The most important conclusion that can be drawn from this is the following: Most enterprises regard the obtainment of high profits (regarded in the law on the financial management of enterprises to be the basic criterion of evaluation) as a very unimportant goal of their operations. Most important is production--meaning quantity--or as measured according to the basis of exemption from charges to the PFAZ (State Vocational Activization Fund).

It may be said, therefore, that introducing an auxiliary criterion of evaluation, and tying it to wages at a time when the labor force is shrinking and there is a strong, inflationary pressure on wage-growth, has resulted in an unofficial change in the operations criterion for economic units. Financial effectiveness and economical management of resources has given way to production growth, and what is worse, without regard to the influence that this production will have on overall economic balance. Maybe that is why as many as 40 percent of the enterprises say that they fulfill credit conditions only partially, and only in relation to certain criteria.

Results

The small progress that the economy is making in the area of efficiency and balance is reflected in the opinions of the bank. They pertained to the policy of hard financing and its results. This policy consists primarily of neutralizing all financial "leeways", i.e., on restricting amounts of credit to enterprises which envisage an unfavorable ratio between wages and productivity, and to those who allocate a large part of profit to consumption goals.

This policy is being implemented by the bank, nevertheless its effectiveness is rated quite low by the very NBP branches surveyed. This is caused by the looseness of the financial system in that part which regulates the inflow of money to enterprises from various sources. Hard money is only money obtained from the bank. But income-tax relief, charges to the PFAZ, subsidies to equalize profitability, and silent acquiescence to price increases--these too are money. Soft, but not bank money, although friendly. The right hand, therefore, is doing something entirely contrary to what the left hand is doing.

Another way, which is spreading, of financing current operations, is the practice of failing to pay obligations, which results in reciprocal credits to enterprises. Bank branches also point to the fact that the price-growth policy enables enterprises to make up for the effects of costs-growth, and the supply system (which does not guarantee regular deliveries of raw and other materials) forces enterprises to accumulate reserves of materials without regard to additional costs.

The policy of hard financing (actually, we should speak only of the policy of hard restriction of credit) is only effective, therefore, in those areas in which the operation of the bank is in accord with other elements of the enterprise's economic and financial system or other operations of the enterprise's environment. If additional nonbank sources of funds to enterprises are activated, then the result is truly a low demand for credit, but there is also high financial liquidity.

For enterprises this is a convenient situation, called, in the jargon, a "door-knob" (or "invitational") system. Speaking seriously, this is a vivid illustration of an uncoordinated financial policy in relation to enterprises, which is (aside from the system of engineering-materials supply during the "stone-chipped-away-at-the-top-level" era) the main reason for poor management efficiency.

The results of the hard money policy thus far are evaluated with some restraint by its very implementors, the bankers, but the reasons for this lie beyond the banking system. That is why an increase in the efficiency of management (not to be confused with production) in enterprises should not be expected until the future, and then only if the conditions under which they

operate become stable, and if the uncoordinated financial policy--or one which considers only local, ministerial, or supraministerial, i.e., the authorities, interests-- is discontinued by all elements which make up the structure which manages the economy.

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ECONOMY

POLAND

GORYWODA DEFENDS AGAINST ACCUSATIONS OF STAGNATION

Warsaw PRZEGLAD TYGODNIOWY in Polish No 40, 6 Oct 85 pp 1, 4

[Interview with Manfred Gorywoda, deputy premier and Planning Commission chairman, by Jan Ruranski: "I Cannot Change the Multiplication Table"; date and place not specified]

[Excerpts] [Question] What do you have to offer today to the factory or province?

[Answer] As chairman of the Planning Commission I am not giving anything away directly. We are drawing up drafts of programs, plans for allocation of money, and sometimes also of materials, which will then be discussed and accepted by the government after minor or major corrections are made.

[Question] And you have nothing in reserve?

[Answer] Of money, no. Yes, there were some financial reserves at one time in the Planning Commission, but they were liquidated to prevent bidding. Because everyone knew about the reserves, they lined up ahead of time. The plan had not even been accepted and some people already wrote to ask for the reserves. Of course, we do have reserves today, but they are not financial, only planned reserves of the basic raw and other materials.

[Question] Then perhaps you have some kind of reliefs, exemptions from the PFAZ (State Vocational Activization Fund)?

[Answer] Those days are long gone. As a rule, the Council of Ministers takes care of such matters in the plan. Current tax reliefs are in the hands of the Minister of Finances, and charges to the PFAZ are under the jurisdiction of the Minister of Labor. Of course, they, too, cannot act on their own. Unfortunately, it has not yet been possible to make the awarding of these reliefs a completely objective process, although we are striving for this. But it is not a simple matter, particularly under present conditions. Perhaps that is why it is often believed that the central authorities have something, can give something, or take care of something.

[Question] Maybe there is an element of self-insurance in this, an attempt to secure one's self against responsibility for one's own decisions, to shift responsibility to the "top," on the theory that "we have told Comrade Gorywoda about our problems, now let him worry about them"...

[Answer] Indeed, some people can thus absolve themselves, by sending their problems to me. But today the local authorities are responsible for local matters, not the deputy premier. Frequently at meetings, especially with the *aktiv*, I am bombarded with demands for capital-investment funds, arguments that they do not have enough money. I don't have enough either, the whole country needs money, and I could talk about our shortages for hours. But the point is not to list the needs, but to determine how, within the framework of what we have, these needs can best be met.

[Question] Some economists, and also some journalists, and through them the public, charge that the Planning Commission is pessimistic, that you are looking on the dark side, planning at minimal levels with no prospects for the future, almost stagnation.

[Answer] What kind of stagnation? A 3.5 percent growth rate is stagnation? Considering the plans of other countries, this is a totally decent rate of growth, one of the fastest among the CEMA countries.

And as to the accusation that we are being pessimistic, that we are planning minimally: A planner, in drawing up the assumptions of development, cannot ignore the conditions under which this development is to take place. And, after all, as we have so frequently repeated, these conditions are extremely complex: a growing, over the past years, disinvestment of production capital, a very slight growth in labor resources, a shrinking potential of growth in supplies of raw materials, other materials and energy, the need to service the debt, etc.

What does this mean in practical terms? It means that the envisaged economic growth, i.e., this 3.5 percent, must be obtained by way of an improvement in management efficiency on a scale not achieved up to now. If, in addition, we take into account the previously mentioned deterioration of conditions, and especially the aging of the production potential, then how can one speak responsibly about setting minimal tasks, or looking on the dark side. Considering the realities, perhaps we should wonder whether we are not being too optimistic.

[Question] The average citizen is not very interested in the percentage growth of the national income. He is interested, however, in whether or not he will be better off in 5 years, and how much better, and the prospects for the future are not exciting. Many people in Poland will not feel an improvement during that time, and for some the standard of living may even fall.

[Answer] That is true. The social needs are great. Out of them come expectations for a faster-than-envisaged growth of consumption. And it is exactly here that we face a dilemma which is vital to our future: Either we permit further degradation of our manufacturing potential, or we are able to obtain understanding that in agreeing to a slightly slower growth in consumption, in a short time we will create the conditions for it to grow faster tomorrow and the day after tomorrow.

[Question] Tomorrow or the day after are a long time away for the person who is living today.

[Answer] True, but, after all, what I am saying does not depend on our good or ill will. It is an economics multiplication table, and I cannot change a multiplication table. This does not mean that we are not planning further improvement in the standard of living in the next 5-year plan. I will remind you only that in the assumptions of the 5-year plan an almost 2 percent average annual growth in real income is envisaged. Therefore, there can be no talk of stagnation, or even regression. Over the 5-year period, deliveries of food articles will increase 12 percent, in terms of quantity, and industrial consumer goods deliveries will increase by 18 percent. And that is what, in the final analysis, determines the growth of consumption. Market balance should also improve, and consequently, accessibility to goods. We also envisage improvement in the quality, durability and reliability of produced goods, particularly durable goods. That, too, should improve the standard of living.

As to the charge that the plan is not "exciting": Yes, there is nothing in our plans such as a Nowa Huta [another Katowice steel mill] or even "an automobile for every Pole." But after all, the determinants for development have changed fundamentally. They set new requirements for us. Undertakings which could succeed under conditions of extensive development have no reason to exist today; then, when there was an excess of labor, even simple engineering was lacking--quantitative development predominated. Now our future will be decided by qualitative progress--universal progress, which encompasses all elements of our economy: science, engineering, and direct producers.

[Question] The program for modernizing the economy also can be formulated so that it is attractive to the public.

[Answer] Yes. Particularly for the engineer, designer, for the world of science, and for the research and development facilities. It will be more difficult to so formulate it for others, especially as regards its first stage. I will give you an example. We cannot plan a significant increase in the number of automobiles in the next 5-year plan because we will not have enough of the indispensable amounts of rolled products, chemical products, or even gasoline. Therefore, we must set a task--to produce an automobile which can be manufactured with one-third less materials and which will burn 30 percent less gasoline. Only then will it be possible to increase the number of automobiles produced and driven. The solution to these problems is a challenge to engineers and scientific-research facilities. This will also take time, therefore the public will not feel the effects of these measures until much later in future.

[Question] We could say to the people: Tighten your belts for 5 years and then things will be much better.

[Answer] Belt-tightening is usually associated with a reduction in consumption. And nobody wants to do that. On the contrary, we envisage a growth of consumption in the plan now being prepared, as I already mentioned. What is important are the relationships between the rate of growth of funds

allocated, on the one hand, for consumption, and on the other hand, for investment, or to put it another way, for development. The need to modernize our economy, and particularly our aging production potential, makes it essential that we accelerate the rate of investment in this area. Over the short term, this is at variance with consumption growth, but it establishes the conditions by which it can be accelerated during the following 5-year period. And so we must make a choice. Either invest as heretofore and reconcile ourselves with the deterioration of the economy and our last-place position in Europe's economy, or invest in modernizing the economy. If we fail to do the latter, it will not be possible to ensure the economy the ability to develop, and thus we will not be able to ensure our citizens a systematic, long-range improvement in their standard of living.

[Question] And what about the low labor productivity?

[Answer] What is labor productivity? Can a worker move his hands twice as fast? Productivity in our industry, under present technology, is not all that low. Certainly there are still reserves in our present organization of work. And an increase in discipline can also produce a growth in labor productivity. We must take advantage of all these possibilities. But overall, we must rely on modern engineering and better work facilities. Recently I was in one of the factories which manufactures mining equipment. Their production is good. Their machines and equipment are sold abroad as well as domestically. But in some places the work is actually done manually. All they need to improve worker productivity several-fold is a couple of modern machines. But these machines require capital investment.

[Question] Maybe increasing the working hours would allow us to get out of our economic difficulties a little faster. The people could earn more money.

[Answer] And that is what we are proposing. Better pay for more work. It is possible to work overtime in the plants. We are thus making it possible to earn more money in various ways. We are doing this in accordance with accepted economic principles and methods.

[Question] In addition to employment, the second bottleneck is the availability of supplies?

[Answer] That is how it really is. In the coming years we can count on only a small increase in raw and other materials. For example, the next 5-year period will be the first without an increase in coal mining. Until recently, we could not imagine such a situation. Today we have to seek opportunities for economic development in better, thriftier ways of processing available raw materials.

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MILITARY

GERMAN DEMOCRATIC REPUBLIC

CIVIL DEFENSE DEPUTY COMMANDER CITES TRAINING TASKS

East Berlin SCHUETZEN UND HELFEN in German Vol 5 No 4 1985 (Signed to press 10 Sep 85) pp 2-3

[Article by CD Colonel K Rude, CD deputy director]

[Text] New challenges for our socialist education system are constantly arising from the successful implementation of our party's and governments policies, that are directed toward the good of the people and reach far into the future. "As our socialist society progresses, the value of education grows because knowledge and education reach ever more deeply into life in all sectors of society," comrade Honecker stated in the report of the SED Central Committee to the 10th Party Congress. This is also the guideline for civil defense training if in present and future we want to fulfill honorably our tasks of further developing civil defense, and to make an even more effective contribution to the realization of the principal task and to the future successful defense of peace. Included in this goal is the continuing training of employees in basic CD knowledge, and we shall continue this training with a new program beginning next year. The training program is built on that of past years, and is directed toward expanding knowledge gained thus far, especially toward developing abilities and skills in preventing protection and correct action in dangerous situations. As is true for qualification procedures for adults, consideration will be given to continuing education for young people just entering professional life.

Basic CD knowledge has time and again proven useful in daily life. The knowledge of how to help oneself and others in complicated situations and not be helpless in the face of problems, this knowledge alone counteracts passive attitudes and leads to positive action. Such positive attitudes and actions are stimulated even more if one can learn, e.g., how through knowledgeable help to oneself and others future damage to health can be averted even in serious accidents. The knowledge of how to prevent fires and how to act correctly should a fire start has made an essential contribution to fire prevention. Knowledge of salvage and rescue work, to mention one last example, has proven to be effective in coping with disasters and catastrophes. And finally, acquiring basic CD knowledge also strengthens our position in the struggle for peace. When used in practice, this knowledge has true protective functions.

As a result of past training practices, the majority of employees--through personal experience come to the following conclusion: "Instruction in basic CD knowledge is necessary and useful in daily life and in dangerous situations of all kinds." This conclusion is supported by the great number of training participants. But employees are also justified in expecting to receive more practical instruction, a closer connection between theory and questions concerning the protection of health and work, against fire and disaster in their firms or businesses, more demonstrations and especially more practice for the development of reliable skills. These concerns will be met by the new program and its training directives.

Both Learners and Teachers

Excellent work has already been done by work collective leaders functioning as instructors, by comrades of the GDR Red Cross, health officials, fire protection personnel and many other employees. Because they are, in part, themselves still learners in this field, they know increasingly better how to present knowledge in interesting ways and with pedagogical-methodical skill, how to make a convincing impression and give practice-related instruction. Equally noteworthy are confidence inspiring discussions which they conduct in relation to their respective topics in their collectives on basic questions of our policy. They deserve our thanks and recognition. We also thank the SED organizations in firms and businesses which provide help and instruction for the instructors, and likewise the organizations of society that give effective support to our training program.

Success, of course, has not been the same everywhere on the same high level. Instructors and educators are not born as such. Most of our instructors do not have pedagogical-methodical training on the level of higher or specialized education. Their contribution be appreciated so much more must therefore. Political conviction, responsibility for the people in their charge, personal commitment and the desire to improve their own knowledge as well as life experience and daily contact with members of the collectives in the course of their daily work--these are the essential bases and secrets of their success in past and future. Today, all work collective leaders impose on themselves the challenge of sharing basic CD knowledge with their colleagues. This implies that they are guided in this effort by their managers, and that the educational facilities of their firms can be utilized for their work, and also that the basic training is firmly connected with official government leadership and management activities.

In addition to providing interesting, graphic and, as far as possible, practice-related continuous education in basic CD knowledge, our program content focuses on its relation to the place of work and employment. In general terms, the concrete conditions of the work place are always a starting point for developing habits of acting and attitude necessary for work performance. Likewise, an entire complex of additional generally valid requirements and norms results from the specifics and conditions of the production process and the firm. These considerations influence essential fields of the content of basic CD knowledge.

Facts that are valid for all employees must here be balanced with the conditions of the work place and the requirements of the place of employment. And

these conditions are essentially different in a chemical plant and in a machine construction plant or in agriculture. The importance of considering these conditions and requirement clearly derives from the basic goal of continuing training in basic CD knowledge: to provide employees with the basic knowledge of how to protect themselves in cases of accidents, catastrophes or other forms of destruction, to enable them to help the victims, to contribute to the maintenance of the work/production process under complicated conditions, or to restore this process as soon as possible. These tasks are especially closely related to those of health, work and fire protection, and also to other questions of work safety to whose improvement the basic CD knowledge acquired by employees can make a more effective contribution. Continuing training in basic CD knowledge will have effects far beyond the place of employment. The knowledge and skills acquired are equally important and applicable to personal life. All of it contributes to a deepening of the feeling of safety and security of people living in our socialist state.

High Demands on Leadership, Management

The demand for continuing education related to work and employment alone results in higher and, in part, new challenges to planning and managing this project. For almost every one of the topics the training goals can be reached only when there is assurance that, with the danger situation underlying the topic or with the relative protection measures resulting for the respective work collective of a specific place of employment, concrete operating instructions, tasks and activities can be pointed out. These cannot be generalized. They must be set down exactly according to documents that are already available, or have yet to be prepared, in each individual place of employment in regard to measures preventing dangers and dealing with potentially destructive situations, and the instructors must then be made aware of these specific conditions to the extent necessary for basic CD knowledge and in good time. General training directives and audio-visual aids must be adjusted appropriately. They contain, in methodical order, all concrete materials relevant to the employees. Incorporated in the training directives are the most important instructions regarding problems that have to be supplemented or added according to specific places of employment. Training directives are therefore indispensable not only for the instructors. They are also necessary as important operation directives for those work groups that are responsible for managing continuing education and for providing appropriate preparation for the instructors. Higher challenges also result from the fact that demonstrations and practical exercises are dominant in continuing education.

The instructors' skill is, in the end, decisive for the quality and educational effectiveness, i.e., for the result of continuing education. Their preparation in the methods and specifics of their fields as well as thorough political-ideological instruction should therefore be the focal point of all efforts. Thus it is indispensable that instructors be prepared through training and methodology for the continuing education they are to direct. In teaching, the "what" is as important as the "how", the skills to be achieved, abilities to be developed, educational goals. Instructions in methodology are likely to be successful if they give the instructor directives that result in practical activities.

The proven practice of giving work collective leaders the job of serving as instructors should be continued. They lead their collectives in the daily work process, know their colleagues best, care for their safety, give appropriate instructions and are most familiar with work place conditions. They are also directly responsible, even in unusual situations, for their collective and for production. In the presentation of appropriate topics, the proven support of specialists in the respective field should be assured, e.g., in the field of self-help and mutual aid from comrades of the GDR Red Cross. From the more demanding contents for leadership in the continuing education in basic CD knowledge can be derived concrete demands on planning, organization, leadership and management of this process. These demands correspond with the requirements and tasks set down in of our party and government in regard to further qualification of government leadership and management in general and, specifically, for adult qualification. Experience shows that on this basis the following points are generally understood, i.e.:

--CD training tasks must be firmly coordinated with the existing leadership system, and leadership instruments must be effectively utilized in this training,

--potential existing in firms and specific areas for adult qualification must be utilized,

--all available forms of continuing education, e.g. the "day of the master" must be utilized in a meaningful way,

--direct contact must be established with work safety training and other kinds of instruction.

Observation of these points assure best results with minimum effort. Goal and content of continuing education in basic CD knowledge for employees make this observation everywhere the basis of progress and success. It results in high responsibility for work groups and education.

Well-Timed Preparation Smooths Road to Success

An essential condition of success is always a well-timed and intensive preparation. This is true so much more where, as in continuing education in basic CD knowledge, there is a job to be done that has process character and makes high actual demands on planning and leadership on all management levels through the specifics of content, organization and development and through the great number of people involved in the solution of these problems. Places of employment should, first of all, work out respective tasks and concrete realization possibilities on the basis of the continuing education program, should then assign these to appropriate sectors and determine exactly their interrelation and implementation in the management process. Proceeding from these preliminaries, it is then recommended that the people responsible for preparation and implementation are made familiar with the political basis of these tasks, are equipped with convincing arguments and thoroughly instructed in their duties.

Conditions for the immediate preparation of instructors to present their first topics must be created in good time, and a high level of appropriate

instruction methods must be assured. Nor must the material side of instruction--which also becomes important--be overlooked. The employees, finally, should also be carefully instructed to be aware of setting continued high goals for themselves, especially during practical exercises. All this should be part of preparations for continuing education, and should then also receive appropriate motivation in socialist competition. Decisive and indispensable for the success of any effort is that each leader base his work on the strength of the SED Party leadership and that he assures himself of the proven support of the organizations of society.

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POLITICS

CZECHOSLOVAKIA

SIK ANSWERS BILAK

Zurich DIE WELTWOCHTE in German 28 Nov 85 p 7

/Article by Ota Sik: "'Brotherly Aid'--'Incredible, the Kind of Lies Bilak Goes In For'"; first paragraph is WELTWOCHTE introduction/

/Text/ In a recent interview, Vasil Bilak, who may succeed Husak one day, claimed that he had prevented civil war in the CSSR in 1968 by calling for "brotherly aid" from the Soviet Army. Ota Sik, who was minister for economics and deputy prime minister at the time, disputes this in no uncertain terms. Sik teaches at St Gallen University. He has been a Swiss citizen since 1983.

It was a good thing that DER SPIEGEL recently arranged an interview with Vasil Bilak, for that allowed the German-speaking public to get a more concrete picture of one of those politicians who not only share serious responsibility for the violent smashing of the "Czechoslovak Spring" but to this day are among the most aggressive opponents of any stir of change, however slight, in the most rigidly frozen state of the Eastern bloc.

It is incredible what kind of untruths this man dares spread to this day before all the world. He lies outright when he claims that at the meeting in Bratislava in August 1968 the Czechoslovak party and government representatives in the joint document also accepted and signed a statement according to which the CSSR was "threatened by a counterrevolutionary revolt." By saying so, does he intend to cement this cock-and-bull story to this day? Or does he want to make an impression with it and thus make himself available for a political promotion?

It is a good thing that Alexander Dubcek had the opportunity to refute this assertion in L'UNITA in Rome. I can only add complementarily that no document with such a statement was ever submitted to the government of that time and that as deputy prime minister I could never have accepted such an assertion. There was no danger of a counterrevolution in the CSSR of 1968.

Bilak's further claim that "in early August of 1968 all the preparations had already been made to install concentration camps for the opponents of the rightist forces in Czechoslovakia" may now be described as a political provocation. There was no authority whatsoever that made such preparations--neither the government nor any ministry going it alone, nor the security forces, the military, or any other institution. I challenge Mr Bilak before the public of

the whole world to name specifically the institution which prepared such measures and was authorized in any concrete way or accredited to do so.

In reality only the ultras, the Stalinists, the so-called "Vysocan Group," constantly talked of the threat of a counterrevolution in the CSSR during the months of the spring. Only in the heads of those veteran functionaries who never had the support of the people and had been completely alienated from them was it possible for the fear of "concentration camps" to crop up. Only they had themselves introduced such labor camps for persons with different political views--for instance, in the Jachymov uranium mines--and therefore were unable to imagine another kind of accounting with political adversaries. The reformers, on the other hand, were busy preparing for such legal conditions and rule of law as would do away with any oppression or pursuit of people because of their political beliefs.

Who is it in fact to whom Mr Bilak wants to impute to this day that they were preparing civil war? The reformers within the Communist Party or the other political parties and mass organizations reawakened to new activity? Why should a civil war be fomented by those forces which had experienced the broadest kind of support and received demonstrations of support by the people and knew that under democratic conditions they could also count on their aims of reform receiving official authorization? Against whom were they in fact supposed to wage civil war? Against the small minority of ultradogmatic party functionaries who in democratic conditions would no longer have been able to hold on to their political posts? No, Mr Bilak, there was no need for rising political forces to prepare a civil war or concentration camps. The Stalinist forces therefore had no choice but to invent political rumors and horror stories, to pass these on to Soviet diplomats, and to ask for military assistance.

Only the communist functionaries who had to be afraid that a regular party congress would not elect them to any office any longer--Mr Bilak among them--found themselves compelled to send a letter to the Soviet rulers requesting the "rescue of socialism." Their very aim was to prevent the holding of a properly elected party congress with the help of military intervention.

In light of these facts, in light of the fact that he himself did not want a democratically elected party congress of the Communist Party to convene, how dare Mr Bilak talk about a "higher form of the political system" in today's CSSR? Or does he consider a party congress to have been convened democratically only if it is manipulated from A to Z by the party machine, if the party machine prepares all decisions and elections in advance, and if it controls the county and district conferences and the party congress in such a way that the outcome fully accords with the interests and aims of the top hierarchy? Never before had a party congress of the Communist Party of the CSSR been prepared as democratically as during the months of the spring--democratically precisely because the preceding decisions and elections at the party conferences resulted only from free discussions of the delegates and came about without any manipulation by a party machine. The Stalinists too were in a position to take a stand there, supporting their ideas of socialism and opposing the trend of reform.

Just as hypocritical is Mr Bilak's assertion that "no one in East Europe wants to make a uniform Soviet model prevail." Even in official articles of the Moscow PRAVDA, for instance on 21 June of this year, under the pseudonym of D. Vladimirov, not only are national models of socialism rejected as a "sophisticated tool of the enemies of socialism," but socialist economic experiments with employing market mechanisms and private initiative are dismissed. Did not the Central Committee of the Czechoslovak party, in the report by Gustav Husak and other contributions, join this indirect criticism of the Hungarian trend? How was it possible for that Central Committee session to reject socialist market concepts with the argument that Czechoslovakia had "not fared well with them"? Such a model never existed in the CSSR, for although it had been formally accepted under Novotny, its implementation was prevented, and even a minimum of the required new legislation with a view to the development of a new model was passed in the 4 months of 1968 since the proponents of reform were in the minority in the government and there was determined opposition to it on the part of the government majority consisting of the old ministers of the Novotny era. The new kind of framework planning was only in preparation, and the old controlled-economy planning, with its plant motivation directed toward inefficiency, had not yet been eliminated. On the basis of what experience is a socialist market model being rejected?

Bilak counts the "socialization of the means of production" among the basic pillars of a socialist order. Has he ever pondered the fact that there can be various forms of socialization and that it is precisely the state-bureaucratic variety which emerged under Stalin that has very little to do with true socialization? Have the workers or the people even the slightest say in determining the way a plant develops, in the selection of the directors, in the drafting of plans? Do the people have a choice between several plan alternatives, considering that there never is any variant of economic development whatsoever? Where the people do not have any choice among several possibilities of development, one cannot talk of a people's decision about the means of production and the development of production--in other words, of economic democracy--and the so-called social ownership is in fact an ownership by a bureaucratized ruling stratum.

Mr Bilak and his ilk always put up the strongest opposition against being described as dogmatists. But is it not precisely a crucial characteristic of dogmatism if one hides behind such general terms as "socialism," "socialist ownership," "leading role of the working class," and so forth and is unwilling to acknowledge the fact that there can be the most varied ways of implementing these general terms, that one need not regard the concrete forms which have been historically accepted or introduced as the only possible or best forms, and that one should examine them critically again and again, and also change them, if need be, in the light of gathered experience? None of the Czechoslovak reformers wanted a return to the capitalist economic and social system; what we wanted was to reform the socialist system and to eliminate its basic faults which had been revealed in thoroughgoing analyses extending over many years.

Bilak and his ilk have turned me and other emigres into counterrevolutionaries and traitors against socialism. For 10 years I fought in Czechoslovakia for a reform of the economic system and never made a secret of my analyses or therapy

Bilak and his ilk have turned me and other emigres into counterrevolutionaries and traitors against socialism. For 10 years I fought in Czechoslovakia for a reform of the economic system and never made a secret of my analyses or therapy proposals but talked about them openly at sessions of the Central Committee, at the party congresses, and in all publications. Never was anyone in a position to reproach me for my proposals or their implementation having led to the reintroduction of the capitalist system. I left my country having been stamped a counterrevolutionary as of the time of the intervention and because I would no longer have had the opportunity at home to continue working in economics--let alone in politics. Hard though it was for me to leave, home there was no alternative if I wanted to continue to work on my ideas and to publicize them.

It is more than said if Bilak in his ideological narrowmindedness maintains that "not a single truly important acknowledged personage from academic life, the arts, culture, the economy or politics left the republic."

The facts belie Bilak's assertion. Later generations are bound to count the emigres proudly among the sons of their people, and to remember them at a time when nobody will give a hoot about Bilak any more.

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POLITICS

CZECHOSLOVAKIA

CLASS STRUCTURE OF SOCIALIST SOCIETY EXPLAINED

Prague ZIVOT STRANY in Czech No 24, 1985 pp 40-43

[Article by Ivan Hruza: "Social Class Structure in a Socialist Society"]

[Excerpts] The ultimate goal of the CPCZ is the culmination of all the metamorphoses which the social class structure of society has undergone through its history, to install a truly classless and fully integrated communist society. Herein lies the principal meaning of socialist development in production, as well as in all other spheres of our social life. The key prerequisite enabling the communist party to bring the construction of socialism to fruition, is unity among the people, a further drawing together of the two fraternal classes and all other population strata.

The report presented by Comrade Gustav Husak at the 14th CPCZ Congress (1971), which set the line for the construction of an advanced socialist society, states: "We need to strengthen the lawful process of bringing together the workers class, cooperative farmers, socialist intelligentsia, and the other social strata." This thought is further elaborated in the report to the 15th CPCZ Congress (1976), which emphasizes that this integration constitutes the very essence of our socialist structure, that it is the unifying element in bringing together our nations and nationalities. The report to the 16th CPCZ Congress (1981) notes that rapprochement among both nonantagonistic classes, the intelligentsia and other strata, is indeed the key task of our entire socialist political system. This is so because the rapprochement is conditioned by higher participation of the working people in administration and management, this being one of its fundamental aspects.

Documents issued by the three above-mentioned congresses also stress the need to further intensify the leading role of the workers class, embodied in the leading role of the party. The 16th Congress report specifically notes the lawful inevitability of the leading role of the workers class in the rapprochement of classes and social groupings: "Only the workers class, existentially linked with public ownership and socialism, is able to unify the interests of all working people and lead them toward a classless society and implementation of the noble ideals of socialism and communism."

In order to understand the tasks set by the party congresses, it is vital to recognize the social class structures of a socialist society, as well as the

objective laws governing its development. The first prerequisite is to respect the difference between the social class and social professional structure. This is so important because both these structures are formed and developed in the course of social labor activity. This is why even today we often encounter a tendency to regard them as one.

The basic difference between them stems from the fact that social labor activity is reflected in two directions. On the one hand, we influence and mold a certain labor object through it. On the other, we simultaneously affect ourselves through its reverse effect. The results of the first relationship are social professional differences, while the second are those of a social class nature.

Within the social professional structure, people differ in terms of the labor object they affect, the manner in which they do so, the tools and technical conditions generally, results of their effort, and the content of their professionalism, such as talent, experience and qualification. The social professional structure is always closely linked with the achieved level of the production forces. In production professions this linkage is direct, while in the nonproduction sphere it is indirect and depends on what nonproduction professions a given society can really afford.

The practical significance of monitoring the social professional structure always lies in the area of ensuring the growth of production forces, and we use the results in the selection, placement and training of labor forces. Under socialism this is essential for national planning of their reproduction and is, therefore, a vital part of the system.

On the other hand, the social professional structure is relatively independent of the quality of existing production relations. These can significantly influence it only through their effect on the growth of the production forces, thus merely indirectly. Monitoring findings on the movement of the social professional structure in themselves are, therefore, not enough to draw conclusions on the development of the social class structure, nor on the bringing together of nonantagonistic classes and other strata.

The social class structure in society is relatively independent of the achieved level of production forces. Their growth affects it only indirectly through their influence on existing production relations. In contrast, the social class structure is always the direct outcome of existing production relations and people's place within them.

The benefit of monitoring the social class structure (i.e., the continuing process of bringing together classes and social groupings) is quite different than in the case of the professional structure. It stems from the fact that the social class position of people determines what political tendency they will, in the final analysis, pursue and how consistently they will do so (i.e., most members of a certain class over a long period of time).

Both social structures are, therefore, intermeshed. Members of the same professions may belong to different social classes. For example, a tractor

operator in a plant or state farm belongs to the workers class. Yet, someone performing the same work on a collective farm belongs to the class of collective farmers. By the same token, members of the same social class are often engaged in different professions.

Bourgeois ideology brings confusion into these questions. One of those who spread their misrepresentations in this country was also T. Masaryk. Especially in his book "Social Question," he tried to "rebut" Marx's theory of class and class struggle through, among other things, emphasis on the number of different professions, an argument which was meant to camouflage peoples class origins and relations. V.I. Lenin sharply rejected such attempts to confuse the workers class and all working people in their struggle against exploiters. As early as 1906, Lenin had the following critical comment on the work of bourgeois sociologists of the period: "What a remarkable depth of analysis! To try to equate professional and class differences is a typical example of "fashionable" critique in its attempt to do away with the concept of "class" and eradicate the thought of class struggle."

In contrast with capitalism, the social class structure in a socialist society has, of course, become solely nonantagonistic, so that differences in social position no longer produce class struggle. There is here a harmonious essence of objective social position common to the population as a whole. This urges people to unite in political tendency and common approach to the building of socialism.

Nevertheless, it still exists here as a social class structure which even here cannot be equated with the social professional one. Otherwise, we could not understand nor influence in a positive manner the process of bringing together both classes and strata. The introduction of socialist ownership of the means of production had fundamentally altered the reverse social impact of labor on those who are engaged in it.

The immediate consequence of this is the differentiation of the social class structure in two nonantagonistic classes, the workers, and the cooperative farmers whose components are also the less numerous stratum of people working in the production cooperatives of the industrial type, and the social economic group of other employees, i.e., those who are not considered blue collar workers, since certain characteristics of their position are different. This last group is not a class in itself but does include in its ranks virtually all those working people not falling into either of the two nonantagonistic classes.

An important role in a socialist society is held by the intelligentsia social group. These are the people performing social professional functions which require, above all, exigent prior preparation. With respect to their social class position, most in this group belong with those who are not considered a class, while the remainder forms part of the two nonantagonistic classes, i.e., university-educated workers and cooperative farmers.

Whatever class or stratum of our nonantagonistic social class structure we belong to, we all share in the socialist ownership of the production means.

This fulfills the basic prerequisite of a society in which each individual lives on the results of his labor. It is for this reason that the advent of socialism was the first step toward a classless and fully socially integrated society.

This development indicates that, while the remaining nonantagonistic social class differences still create varying immediate special interests, satisfying these is conditioned on cooperation and mutual assistance, so that they appear to merge completely in future outlook. This is why they no longer confront each other but rather are coming closer to full social integration. The basic causes of this lie in the material being of people and the lawful relationships of its movement. Realization of these relationships is, of course, possible--as is the case with any type of movement--only through a number of intermediaries of which some might appear questionable, since they indicate only their long-term average. Nevertheless, this process remains inevitable and lawful.

Anything placed in the way of this process, merely represents a detour doomed to failure. Our own experience during the crisis years show that objective development cannot be stopped. In the end, any such detour will be eliminated by this development, as will those who would profit from such obstacles at the expense of others.

From this also stems the relative independence of peoples consciousness in the process of bringing together the two classes and the other strata. For the impact of this process is directly in proportion to how far we recognize its lawful material relationships, our own place in them, and to what extent we apply them purposefully, in order to speed up this development in which a vital place is held by the communist party and its leading role in society.

Especially important in the advance of socialism and the rapprochement of classes and other strata is the contribution by the producers, i.e., the workers class and the cooperative farmers, along with a portion of the social economic grouping of other employees and members of the intelligentsia. This stems not only from the lawful impact of production forces growth, rather it also lies in the reverse social effects of labor in production on those who perform it, regardless of which class or stratum they belong to.

This is because, in contrast with some other types of work, labor in production is technically the easiest to measure, especially in terms of required time limits, intensity and quality. Under socialism where the means of production are in public ownership, this brings out those reverse social effects on producers which motivate them into socialist competition, to be thrifty, support the transition to intensive development in our national economy, and actively oppose all waste in production, as well as in all other spheres of our life.

Thus measured, the material living conditions of producers under socialism orient them in this direction and encourage them to reaffirm their fraternal alliance with the cooperative farmers. This, in turn, strengthens their unity not only in the fulfillment of the immediate tasks of socialist

construction, but also in their common search toward a classless and fully integrated communist society. This is especially significant in the process of overcoming the social differences between town and country.

The producers' alliance also enables them to further increase their social influence on the strata of the nonproduction sphere where the reverse effects of labor are less apparent. This accelerates the process toward full social integration.

A vital role in the advance of socialism and the bringing together of the two classes and social strata is played by the national form of socialist ownership. It affects the orientation of all employees of a socialist society because they are intimately related to it. This includes the workers class, as well as the entire social economic grouping of other employees (even those outside the production sector), of which the majority of the intelligentsia is a part.

Not even the role of the national form of socialist ownership in the rapprochement is exhausted merely by the fact that big industry which belongs to it represents the decisive material and technical base of production forces' growth in the building of socialism and communism in both town and country. This role also lies in production relations. Production advance within this form of ownership, especially close to one class and other working people, has indeed a determining influence on their lives. It affects division of labor among its members, better working conditions, as well as the sharing of means and the amount of their income.

The variations in the two forms of socialist ownership differentiate a socialist society. The workers class and other employees are existentially dependent primarily on its national form, while the cooperative farmers class depends, first of all, on those production means which are in group ownership of their cooperative.

The higher degree of socialization achieved by the workers class and all other employees, has certain other consequences. It is also reflected in that their direct linkage with the national ownership form provides the best conditions for social comparability of the labor performed by each and every one of them. In comparison with the cooperative farmers class, all this motivates much more directly their effort to help implement the overall, long-range advance, to assist most actively in the strengthening and growth of both forms of socialist ownership, in the intensification of labor discipline, development of socialist collectivism, proletarian and socialist internationalism, while simultaneously opposing consistently everything which slows down and disrupts this development.

The national form of socialist ownership thus becomes the base for everyone's orientation toward strengthening his or her identification with this system. The nucleus is formed by the union of workers and intelligentsia from the ranks of the other employees. This union also helps strengthen unity within its components in the process of rapprochement. Hand in hand with this, it

creates conditions for providing more assistance to the collective farmers class toward bringing together the two classes and all population strata.

One of the key conditions for the advance of socialism and the bringing together of the two classes and other population strata is socialist democracy. In its essence, this is an expression of the union of all working people in both town and country. Therefore, their public political activity in the components of the National Front, as well as directly in state administration, represents their instrument of social management through which they are able to influence and realize the process of social class rapprochement with activism and initiative.

Under socialism, where class antagonism had been abolished for ever, the internal, structure of elected representative state organs proportionately reflects the nonantagonistic social class structure of society. This is analogous in all components of the socialist political system. It is in this manner that socialist democracy has become a sphere of bringing together both classes and all strata, which has its relative primacy in this process, as well as in general economic policy.

The principal mission of the socialist state apparatus (including its organs in the national economy) which is professionally suited for socialist management, is, therefore, to aid in its everyday care for socialist construction to achieve an ever greater participation of the working people in socialist management, to do this under the leadership of the communist party and in close cooperation with all components of the socialist political system. This is also the case with all components of the National Front, and reminds one of the fundamental ways toward higher activism, initiative and dedication of all working people in our socialist construction. It is also an inseparable part of the advance toward a classless and fully integrated communist society, as well toward future replacement of the state with a communist national self-administration.

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POLITICS

GERMAN DEMOCRATIC REPUBLIC

CSSR, GDR COOPERATION AGREEMENT ON SCIENCE, ECONOMICS

East Berlin NEUES DEUTSCHLAND in German 28 Nov 85 p 6

[Article: "Excerpts From the Program of Economic and Scientific-Technical Cooperation between the GDR and the CSSR Up to the Year 2000"]

[Text] Far-reaching measures for intensifying bilateral cooperation are introduced by the program, signed on Tuesday, 26 November 85, in Berlin by Erich Honecker and Gustav Husak, on developing economic and scientific-technical cooperation between the GDR and the CSSR up to the year 2000 within the implementation process of the basic agreements between the highest representatives of both countries and in agreement with the decisions of the economic advisers of RGW countries on the highest level. The aim of the program is to make even more effective, through joint efforts, science and technology as decisive factors of intensifying production, increasing work productivity, and economizing materials and energy, to produce top quality products in selected fields, and to expand specialization and cooperation in production as an essential contribution to the accelerated development of industrial sectors and to increasing mutual goods exchanges.

The implementation of the agreements will contribute to develop even more closely the fraternal relations between the GDR and the CSSR.

The program states that the GDR and the CSSR are guided by the desire to further strengthen friendship and cooperation between the people of both countries on the basis of the agreement of 3 October 1977 on friendship, cooperation and mutual assistance between the German Democratic Republic and the Czech Socialist Republic. By accepting the program, both countries contribute to the implementation of the June 1984 decisions of the economic advisers of RGW countries on the highest level on further intensifying and developing the cooperation and progress of socialist economic integration.

Both countries proceed from the economic potential and the achieved high level of economic and scientific-technical cooperation between both countries, and from the conviction that matured conditions call for a qualitatively new step in the coordination of economic policy for the joint solution of important economic problems, for the continuation of the socio-economic development serving the good of both countries, and for long-range cooperation.

1. Proceeding from the national concepts and the agreements within the RGW framework, scientific-technical cooperation will be expanded as follows in order to attain these goals: development of processes and equipment for the effective utilization of energy sources and the development of higher quality energy carriers; development of technical equipments, effective technology and processes for automating production, including the utilization of microprocessing and robot technology; development of new materials and technologies, research, development and production in selected bio-technologies.

2. The GDR and the CSSR proceed from the fact that, in the interest of accelerating the process of intensifying production, cooperation will be expanded in the fields of machine construction and electro-technology/electronics. The intensification and expansion of specialization and cooperation in the production of final products and building components, especially in the metal processing industry, will create conditions to assure the dynamic development of mutual goods exchange in future 5-year plans.

Work assignments in the field of electro-technology/electronics will be concentrated on cooperation in the field of micro-electronics and efficient electronic construction parts, on the further development of specialization and cooperation during the production of electronic consumer goods, on the intensification of cooperation in opto-electronic transmission systems and in the automation of technical production preparation.

Focal points of cooperation in the field of machine construction are the development and utilization of flexible machine systems in industries short of manpower including the necessary integrated robot and transport systems; the intensification of specialization and cooperation in machine construction especially during development and production of fully automated production lines, sectors and fields with top level quality, and during utilization of electronic guidance systems; the expansion of specialization and cooperation on the basis of existing government agreements on cooperation in the fields of agricultural machinery construction, automobile construction, rail construction machines, rail vehicles, foundry machines, pumps and compressors as well as ventilation and refrigeration technology.

3. The GDR and CSSR cooperate in supplying the demands of selected raw materials and fuels important for the national economy. Focal points are the effectiveness growth of soft coal production and enrichment, including the development of more effective processes, technologies and appropriate equipments; the development of technical equipment and more effective processes for the highest possible enrichment of available raw materials as well as for the production and utilization of secondary raw materials and secondary energies; the development of scientific-technical solutions in the field of environmental protection and the utilization of appropriate processes for maintaining clean air standards and for a better utilization of forests and fields.

4. In all-black metallurgy, colored metallurgy and refractory industry cooperation will be intensified in order to raise the quality level of applied

raw materials. Efforts will especially be directed toward research on and development of new metal materials and alloys for new steel products such as wires, cables and pipes, as well as of technologies for their production. Conditions must be created to improve the relation between quantity and quality of products.

5. In the chemical industry, cooperation is directed toward continuing and intensifying the already prepared, long-range and mutually advantageous cooperation in the area of production and utilization of olefins, and toward research, development and production in selected fields of industrial bio-technology, including the utilization of the results in sectors of the national economy, and in the field of polyurethane chemistry.

6. In order to meet more effectively the needs of the population of both countries for high-quality consumer goods, the GDR and CSSR will further intensify their cooperation for assuring the availability of the necessary raw materials and materials, machines, equipments and modern technological processes. Focal points are: development and production of high-quality electronic consumer goods and their components, especially hi-fi equipment, cassette recorders, color television sets, record players, photo and movie equipment, special technologies for electronic consumer goods; effectiveness of production and mutual supply of durable household appliances and household goods in order to make them more varied and plentiful; expansion of the consumer goods trade including that of domestic assortments, cooperatives and department stores.

7. In agriculture, in the forest and food industries, the existing scientific-technical potential and the measures taken to develop the material-technical basis will be directed toward fully applying the complex means of technology and chemistry to agriculture, toward increasing soil fertility and implementing improvements, toward the development of technologies that will intensify crop and livestock production, and toward the utilization of biotechnology in crop and livestock production. Joint work in breeding will bring about the creation of high-yielding, disease-resistant and qualitatively valuable kinds of grain, sugar beets, potatoes, fodder plants, fruit and vegetables.

8. In construction industry, both sides agree to raise the technological level of the projection, production and building site processes, to develop new building materials and building material combinations of high quality, and to introduce these into production.

9. In the transportation system, the GDR and CSSR will cooperate in the development of the material-technical basis of the railway transport system, and in increasing border crossing capacities for railway and highway traffic.

10. In the field of environmental protection both sides will develop joint solutions for the problems of harmful emissions into the air and of decreasing the harmful influence of air pollutions on forestry and agricultural production.

11. The dynamic development of trade will be continued and considerably expanded on the basis of the results of cooperation in science, technology and production, of the development of cooperation and specialization and corresponding results of coordinating national-economic plans. To an increasing degree, trade should be controlled by high quality products. Mutual delivery of supplies will take place according to long-range agreements and annual protocols.

The Joint Committee for Economic and Scientific-Technical Cooperation Between the GDR and CSSR will organize and control the implementation of this program.

The appropriate ministries of both countries will develop and conclude the necessary, specific industrial agreements and contracts for the development of economic and scientific-technical cooperation, and of specialization and cooperation in research and production.

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POLITICS

HUNGARY

GROSZ TERMS PUBLIC MOOD DISQUIETING

Budapest ESTI HIRLAP in Hungarian 23 Dec 85 p 3

[Interview with Karoly Grosz, first secretary of the Budapest Party Committee, by Gabor Palzs: "Society Requires Continuous Renewal: Conversation With Karoly Grosz About Our Plans, Our Concerns, Capital City's Public Mood"; date and place not specified]

[Text] 1985 was the year of politics: the 40th anniversary, the party congress, the elections, the European cultural forum. How does Karoly Grosz, first secretary of the Budapest Party Committee and member of the MSZMP Politburo, judge the impact and continuation of our political decisions in the capital city, in the capital-city movement?

[Answer] The sociopolitical impact of the eventful year is unambiguously positive but not without contradictions. The fact is that it has given rise to considerable political-intellectual activity. Millions of people--hundreds of thousands in Budapest--expressed views on their lives and plans. The conclusions became clear in many important issues which determine our future, there was a convergence of views, and information "blank spots" ceased to exist. The inhabitants of the capital city accept and better understand what politics is aiming for. A lot of people want to act in the interest of faster growth, of solving problems. It is a good feeling to see, hear, and experience this.

What is the contradiction? Much of the energy of those active in the political movement has been absorbed by the programs. That is why they have not had time for many small but significant questions. It is contradictory that with great emphasis--due to the nature of the programs--they have added up the results, undertaken newer and newer programs, and thereby contributed, against their will, to the origin of certain illusions. Even today many people are inclined to think that it is enough to adopt the resolution and the latter is the same as reality.

The enormous amount of work has, however, yielded a significant political result: it has contributed to the fact that the political situation in the capital city is balanced and that our political relations are strong. This has, of course, its external, international connections. Our system of defensive alliances has grown stronger, and in the wake of the Soviet Union's peace initiatives--especially after Geneva--tension has eased on a global scale.

[Question] On the basis of what has been said, what do you judge the public mood to be in the capital city?

[Answer] What is the mood of the capital city? That cannot be answered with one adjective and one sentence. I would describe it in two words: multihued and sensitive. Confidence, faith, here and there disappointment, hope and hopelessness alike can be found on the map of the public mood. There is agreement on goals, heated debate on methods. It is my observation that the direction of the public mood's development is not a reassuring one. Discontent is increasing, and there is a lot of criticism. But every day we encounter oversimplified generalizations. According to many people, the leadership is more optimistic than it has a right to be. Extremist views are gaining strength: "Nothing has happened since the congress" or "Hungarian society as a whole is in a stalemate situation." The many hues of the population's mood are a function of the divergent opportunities which the various social classes and groups have to achieve their material and creative goals. From this stems a very enlightening deduction: we need a more multihued social-class policy.

[Question] As first secretary of the Budapest Party Committee, you have visited numerous factories, institutes, and artistic workshops in recent months. On the basis of your observations, what is the reason for the critical tone which has intensified due to our general social conditions?

[Answer] I see the reason for the critical tone essentially in our economic situation, but not just there. At the start of the year, we were confident that the effectiveness of national production would improve more swiftly, there would be better distribution, and we would be able to modify our everyday concerns more easily. At the end of the year, we can render an account of only modest economic progress. Several of our measures did not yield the hoped-for result. Examples of these were the regulators to stimulate exports and the method of introducing subsidies for settlement expansion. Problems in connection with supplies increased: the range of insufficient goods expanded, unfortunately.

Another reason for the increase in criticism is the existence of disparities in income. It is difficult for part of the general public to tolerate income differences proportionate to honestly performed work, but it is slowly being accepted. But the increase in income obtained without work is not accepted--and justifiably so. We have still not found a way to prevent or curtail this. I am not talking about the cheaters--they must be subjected to criminal prosecution--but rather about those sizable incomes which arise in conformity with the rules but a significant share of which the state--as it does everywhere in the world--does not curtail in our country. It would be senseless to deny that large incomes also arise legally, that is to say, the assertion of market processes and the lack of harmony between supply and demand afford an opportunity for this.

Furthermore, I consider another such reason to be the fact that we have released to the general public many new concepts and measures for the careful examination of which there was not enough time: enterprise business work partnerships, the enterprise council, the new tax system, and many more. We have plenty of ideas, but more must be done to get people to undertake additional work.

I include among the reasons the weakness of our ideological work. We do not give adequately weighed answers to social problems. What am I thinking of? What do poverty and the economy mean today? Where can the line be drawn on the assertion of market laws in socialism? What are the sources of conflict in relations between the socialist countries?

The weakness of our party work is also a source of the unfavorable mood. Some of the party leaders have displayed uncertainty on certain issues. In judging the political situation, everyday concerns and erroneous individual phenomena receive a disproportionately large role, and generalizations are made on the basis of them. Yet with higher-quality information and explanatory words we do not adequately promote the understanding of interrelationships and the emergence of a new realism. The political unit in the party is very strong, but the action unit is weak. The upshot is that we are not always unambiguous in the representation of policy. But the party leadership in Budapest did not gauge in time the fact that if there is "expectation from above," then it must be satisfied as far as possible. Nor have the work style and work method of the Budapest Party Committee adjusted themselves properly to the quickly changing political requirements. The party organizations must be given more supportive material and methodological aid. And this calls for a new style. The public mood is upset by deteriorating public security, which is becoming more and more of a social issue in Budapest.

[Question] There is an urgent need for new quality in every domain of life. We have preserved many outmoded phenomena in economic structure, in state administration, in city planning, and in human thinking. The impact of these things is known to some degree. What kind of long-term guarantees can political work give that assure a new and modern breakthrough?

[Answer] It should first of all be made clear what "modern" means. It is still not certain that what is new is also modern.

What is the guarantee? We ourselves are the ones who have the capacity for change and development. Development means elimination and destruction of the outmoded as well as creation of the new. This always materializes, of course, by means of a struggle between the old and the new. Nowadays you hear more and more often that in politics young people represent the modern and older people the outmoded. This is a false simplification! If it were true, we would quickly become modern. What is modern is modern not by virtue of who represents it but rather by virtue of to what degree our decisions and our conduct can promote progress. This must be borne, however, again and again in every era by society and its leading force, the party. The leadership and the leaders must, of course, walk in the vanguard, assume personal responsibility, and be held accountable. Yet the leadership cannot take over responsibility for continuous renewal from society as a whole. In the long run, the most reliable guarantee is a good policy which has been pursued for decades. But without a followup to changes no responsible leadership can give an absolute guarantee.

It is my observation that nowadays, beneath the demand for modernness, numerous obsolete and retrogressive notions and endeavors are being reborn. It is our job to express our views on them, debate them, and eliminate them. Constructive polemics are needed! I point out that today many people expect candor from others,

but unless they hear their preconceived notion at some debate forum, they reject it and take umbrage. This does not promote mutual respect.

[Question] It seems as if the courage to show off our accomplishments is needed today more than the faultfinding which seeks the bad even in what is good. Where does this practice come from and how can we reverse this approach?

[Answer] When the situation is more difficult, greater courage to show off one's accomplishments is always necessary. This is an old observation. A difficult situation puts people, faith, and commitment to the test. It has become the custom nowadays to exaggerate the mistakes and downplay the achievements--for the sake of glamor and sensationalism. I believe that this is a short-lived phenomenon, because more and more workers are recognizing that it safeguards neither their own future nor the nation's progress--which means the future of their children and grandchildren. There is one way out: better and more efficient work everywhere.

When the difficulties increase, the "prophets" and those who fish in troubled waters appear on the scene; hostile and oppositionist pursuits gain strength. They have never solved the community's problems, however. Progress has always been taken care of by the creative work and the responsible political and moral conduct of honest, hard-working human beings. I believe it is the job of the capital city's party leadership to establish the best possible political and intellectual conditions for this creative work. It is, of course, illusory to demand ideal circumstances, but we can do more and better than we do at present. To be frank, we must shift the situation and the public mood in a propitious direction by jointly working out the solutions to problems, by encouraging and supporting new exploration, by having complete faith in well-intentioned pursuits, and by developing individual and community creativeness. Our good foundation for this is the resolution of the 13th party congress. Let us convert this into practice everywhere. This will also mold the approach, that is to say, the practice will first and foremost shape the mentality, the intellect and--under the influence of these--the mood of the people.

[Question] What can the people of Budapest look forward to in the capital city's seventh 5-year plan, which is now in preparation?

[Answer] Before I answer that, a few words must be said about the sixth 5-year plan. Budapest's development during the sixth 5-year plan coincided with the chief courses laid out in 1980. Despite our everyday problems, the capital city has made progress during the last 5 years and has been enriched by many new institutions which significantly affect the living conditions of the inhabitants. Except for the construction of apartments, we have fulfilled our social-policy program. And that is no small thing.

In 1984, the Politburo of the Hungarian Socialist Workers' Party analyzed the chief courses of the capital city's further development. The emphasis of the standpoint was that Budapest should continue to receive the attention suitable for a capital city.

We have no definitive plan yet, but we find that the sum for managing the seventh 5-year plan will surpass by 42 percent the money spent during the sixth 5-year

plan. The construction of apartments will increase, though modestly in comparison with what is needed. According to our estimation, we need to build 97,000-99,000 apartments, but in all likelihood it is feasible to construct 60,000. This requires 65 percent of the Capital City Council's investment outlay. We cannot undertake to satisfy the demands for quality. The social demand is great, however, for the renovation of city districts, of dilapidated and neglected apartments. There must be further improvement in the provision of public utilities. Receiving increased attention here are the construction of housing developments, the assurance of wholesome drinking water, the installation of a water, gas, and sewerage network which comes to fruition in keeping with the financial capacity of the population, and many other collective tasks. The capital city's primary job in transportation development continues to be the improvement of mass transportation. We should further improve health care services. Because of the demographic peak, improving the complete system of conditions for secondary education will be a major assignment. The main goal of commerce--in addition to the preservation of the level already reached--is improvement of the daily supply. A task to be emphasized is improvement of the network which serves the new housing developments.

Protecting the environment of Budapest requires enormous sums of money and a concentration of intellectual forces. This means, above all, preservation of the Danube's water quality, reduction of air and noise pollution, and the utilization, placement, and safe destruction of communal and hazardous waste. We must by all means expand the capital city's green districts and limit construction on the green and hilly areas of Buda. Our natural assets must be safeguarded by a broad concentration of social forces.

I can say that during the next 5 years there will not be complete harmony between the needs which are piling up in the capital city and the possibilities. But I believe that in the wake of our work's accomplishments our living conditions will improve, and our capital city will become more beautiful. And here--in the interest of the country as a whole--every inhabitant of the capital city will find his personal assignment. I call upon the people of Budapest to do so.

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SOCIOECONOMIC DEVELOPMENT STRATEGY REVIEWED

Bucharest ERA SOCIALISTA in Romanian No 22, 25 Nov 85 pp 1-5

[Unsigned article: "A Scientific Strategy for Raising Romania to New Heights of Progress and Civilization"]

[Text] As Nicolae Ceausescu said in his speech at the Plenum of the RCP Central Committee of 13-14 November 1985, "Let us start the year 1986 too with the firm resolve to improve all activities and to do all we can to carry out the decisions of the 13th RCP Congress and the RCP Program! We have all that is needed and we must try to prove ourselves worthy of the confidence of the party and the people and our responsibility to them!"

The recent Plenum of the RCP Central Committee discussed and approved documents of the greatest importance to socialist Romania's socioeconomic progress and to the next stage of its development. Those documents serve the major interests of the people and the development of socialist Romania, entirely reflecting the guidelines set by the 13th RCP Congress. The Plenum of the RCP Central Committee brought out Nicolae Ceausescu's telling role in the scientific, realistic and creative determination of the party and state policy and in setting and accomplishing the great goals of construction of the fully developed socialist society that will open up new prospects for Romania's advance toward communism.

The party general secretary's address to the plenum fully analyzes the great achievements of Romania's working class, peasantry, intelligentsia and its entire people in the 1981-1985 period, the major aims of Romanian domestic and foreign policy, socialist construction in the next five-year plan, improvement of party and state activity, and the best ways to implement the decisions of the 13th Party Congress and the program for building the fully developed socialist society and communism on Romanian soil. By its entire content and its guidelines and assignments it sets the strategy for raising Romania to new heights of progress and civilization.

When it fully understood the brilliant ideas, theories, policies and recommendations in Nicolae Ceausescu's speech, the plenum decided in an enthused unanimity that it would become the inspirational program for the work and struggle of the entire party and people for the unfailing accomplishment of our tasks and goals in the coming year and in the new five-year plan.

The Plenum of the RCP Central Committee was a new occasion to reaffirm the staunch unity of the party and the people around Nicolae Ceausescu, socialist Romania's best loved and respected son and the founder of modern Romania, and to declare with unprecedented vigor the boundless commitment and determination to carry out with keen patriotic and revolutionary dedication his directions and assignments, the objectives of the new five-year plan, and all that has been planned by the high forum of Romanian communists, the 13th Party Congress.

The 1981-1985 Five-Year Plan, which will soon be over, has provided for fulfillment of the plans to bring Romania up to a new developmental level and to raise the entire Romanian people's material and cultural living standard, in spite of the difficulties created by the international economic situation and some contradictions that arose in the development of the various sectors of the Romanian national economy. After a decade of progress on a broad front, the goal of the five year plan we are now completing, as it was recommended at the 12th RCP Congress and at the National Party Conference in 1982, was to consolidate the previous gains and create conditions for a new and intensive national development in the next period. As Nicolae Ceausescu concluded, "It may be said that in general we have accomplished the aims that we set ourselves. We have succeeded not only in consolidating what we achieved in the previous period but also in progressing, albeit at a slower pace, and continuing to progress in national development and building the fully developed socialist society."

A Productive and Inspiring Record

The good results obtained in all socioeconomic activities are graphically illustrated by the figures. In 1981-1985 the net industrial output increased at an average annual rate of more than 6 percent and was up 36 percent from 1980, while the national income grew at an average annual rate of about 6 percent and is now up more than 32 percent from 1980. In the five-year plan we are concluding, the industrial commodity output showed an average annual growth rate above 4 percent and the agricultural output one of about 2.5 percent.

Consistently following the established policy on accumulation and investments, the party and state allocated about 29 percent of the national income to the development fund, increasing investments throughout the 1981-1985 period by about 8 percent and securing a corresponding development of all sectors of the national economy.

Noteworthy progress was also made in research, education and culture. Those sectors, to which the party and state attach great importance, are becoming factors vital to general national progress and to improvement of the entire people's standard of civilization.

Romania is playing an increasingly active part in the international division of labor and in the world circulation of material and cultural values.

In accordance with the increasingly consistent emphasis on the qualitative and intensive aspects of economic development, in the last few years labor productivity has increased by 16 percent, material outlays and production costs in general have gone down, and a major gain in national economic effectiveness is assured. There have also been a number of improvements in the technical and

qualitative standards of products, in assimilation of new products and in modernization of existing ones.

This time too the productive results of economic activity have favorably affected the people's living standard, its constant improvement being the supreme goal of party policy. Throughout the whole five-year period workers' real wages went up about 8 percent and peasants' incomes over 12 percent. Commodity sales increased by more than 8 percent in comparable prices and the volume of services to the public increased by about 60 percent.

The results of this five-year plan are encouraging to be sure, but they could be much better. The plenum concluded that in addition to the general causes there were also a number of serious defects in organization of production and in use of production capacities and manpower. The facts show that not all the central organs acted entirely responsibly in performing their tasks. There were also many shortcomings in the performance of the workers councils in centrals and units. As it was pointed out at the Plenum of the RCP Central Committee in November 1985, all the conclusions must be drawn from their performance and the appropriate steps must be taken to remedy the unsatisfactory situations and to improve the activity in all fields.

Exemplary fulfillment of the new five-year plan and the decisions of the 13th Party Congress is not only necessary but also quite possible because all the requirements for it exist. As Nicolae Ceausescu pointed out in his address to the plenum, "I think we have all that is needed and particularly we have a strong party, a working class that is performing its historical mission well as the leading class in society, and a peasantry and an intelligentsia that are performing their tasks well in all fields. Therefore we have every confidence that we shall be able to begin the new five-year plan under favorable conditions and a guarantee that we shall carry out the decisions of the 13th Party Congress."

On 1 January 1986 we shall start the first year of the Eighth Five-Year Plan for Romania's Socioeconomic Development, to which the decisions of the 13th RCP Congress are basic as well as the RCP Program for Building the Fully Developed Socialist Society and for Romania's Advance Toward Communism. As the party general secretary pointed out, "In the new five-year plan Romania will progress from the stage of a developing socialist country to that of a medium socioeconomically developed country, and in the year 2000 it will become a fully developed country in all respects, in a position to assert the principles of communism in Romanian society more emphatically. All this calls for a new quality of the whole Romanian people's work and life."

The Unified National Plan for next year specifies an 8-9 percent gain in the industrial commodity output, one of 15 percent in the net output, and one of 6-7 percent in the agricultural output. These growth indices are somewhat higher than those set in the five-year plan because the base figures, that is some of the 1985 results, were below plan. Under these circumstances it is absolutely necessary to obtain a higher developmental rate in the first year of the new five-year plan and thereby lay a solid foundation for complete fulfillment of the planned indices in the following years of the whole five-year plan.

The 1986 plan and the whole new five-year plan is characterized by the transition from extensive to intensive development, a policy that has already made itself felt in the five-year plan we are concluding. This policy is of decisive importance to socialist Romania's rise to new heights of civilization and progress.

The rapid development of the national economy and of Romanian society as a whole is inseparable from procurement of the necessary power base. As we know there have been a number of shortcomings in the power field in recent years, and they still exist. This is not due to any lack of power production capacities but primarily to the faulty operation of the coal-based power plants and the drought that seriously impaired the operation of the hydroelectric power plants. This situation necessitates drastic measures to implement the power program efficiently and to operate the electric power plants irreproachably, especially the coal-based ones. Redoubled efforts must be made in this field so that there will no longer be any power problems this winter, provided of course that there is economic and rational consumption.

The 1986 plan and the five-year plan as a whole call for all the measures needed to activate the first nuclear-electric power plant and all the other coal-based power plants or hydroelectric power plants under construction. Of course it is also necessary for all sectors to take more responsibility for promotion of new technologies consuming less power.

All workers in the mining and petroleum extractive industries have highly critical tasks. The main problem in mining is to produce a high-quality output, especially of coking coal. In the petroleum industry, fulfillment of the extraction plan and intensified recovery of crude oil from deposits are to be primarily emphasized. The most efficient performance of all those tasks means reinforcement of order, discipline and sense of responsibility on the job, consistent application of the new overall contract system of remuneration, and proper organization of the activity as a whole.

Efficient technical-material supply of production, which is essential to its regular performance with high standards of quality and efficiency, makes heavy demands upon the metallurgical, chemical and construction materials industries, all of which require a greater sense of responsibility and initiative and greater efforts to produce new materials with improved characteristics and lower raw material inputs.

Perhaps now more than ever the machine building industry is a major source of the Romanian national economy's development, to which the intensive factors are becoming increasingly important. Activation of the production capacities under construction, retooling of the existing ones, and general promotion of modern equipment and technologies throughout the national economy depend upon the qualitative and technical standards of the machinery, equipment and installations and the punctuality of their deliveries. As Nicolae Ceausescu pointed out, "I have already mentioned on other occasions that we have made heavy investments and created a modern machine building industry equipped up to world standards, and its output must also be up to the highest world standards. This requires the managers of the three ministries, the management councils in centrals and units, and all workers to strengthen responsibility, discipline and order

and to take firm measures so that next year the bad situations that have developed will be eliminated entirely."

Agriculture, the second basic sector of the Romanian economy, is also receiving the full attention of the RCP and the state. There are higher indices for that sector's development next year because its 1985 output was impaired by the drought. But the planned outputs are quite feasible in view of Romanian agriculture's great possibilities.

If high and stable yields are to be obtained under any circumstances, the irrigation and land improvement program must be completely implemented. The priorities will be on production of bread grains, annual cultivation of double crops on at least 2 million hectares, and more pronounced gains in the outputs of truck gardens, vineyards, orchards and industrial plants. Development of zootechnology, a sector that reflects the degree of intensification of agriculture, also requires heavy emphasis. As Nicolae Ceausescu pointed out, "We must always bear in mind that we cannot supply the public with food products efficiently or meet the nation's other needs without the specified numbers of livestock and the corresponding yields."

Proper supply of the state reserve with agricultural food products is a matter of the greatest socioeconomic importance and a highly patriotic duty. No one can shirk this duty. Any disregard of it is a violation of the laws of the land, of the party decisions, and of the standards of socialist ethics and justice.

In the coming year and throughout the 1986-1990 Five-Year Plan an extensive investment program will be implemented by allocating 30 percent of the national income to development. As it has been repeatedly said in the latest party documents, the investments will be concentrated primarily upon retooling the existing production capacities and raising the technical standards of the production equipment in keeping with the requirements of intensive economic development rather than upon construction of new capacities.

On the lasting foundation of an economy that is progressing soundly on the path of modernization, intensive development and a higher quality, Romania is participating more and more actively in the world circulation of material and cultural values. Economic exchanges and cooperation with the CEMA countries and all the socialist countries in production will be intensified in 1986. As the party general secretary pointed out, we are "determined to take the firmest measures to implement the programs approved at the high-level conference on last year's economic problems and CEMA's decisions on behalf of better specialization, rational use of production capacities, higher technical and qualitative standards of production, and better satisfaction within CEMA of the requirements for energy, raw materials etc. We are also determined to take an active part in the General Program for Research and Technical Progress in order to meet the socialist countries' requirements in this field and bring about a rapid development of our countries on the basis of the most advanced technology." The RCP and the state realize that CEMA has many possibilities for implementing the approved programs, for the member countries' intensive development in the 1986-1990 period, and for demonstrating by facts the superiority of the socialist economies and of socialism in general.

Moreover, in keeping with the principles of foreign policy that Romania constantly promotes, collaboration with the developing countries as well as the exchanges with the developed capitalist countries will be further expanded in the coming year too, and those relations will be based on the principles of equality and mutual benefit.

In view of the world economic situation and especially the financial situation and the excessive interest rates, Romania will continue to develop its reciprocal trade, which has proved effective and very important for balanced and mutually advantageous exchanges. It is intended to repay about 30 percent of Romania's foreign debt next year so that it can be entirely repaid very soon.

High Quality and Efficiency in All Activities

Its consistent pursuit of intensive development will ultimately make the Romanian economy a highly efficient and competitive one in all respects, producing goods and services with superior performances that will meet the most exacting demands of the domestic and foreign beneficiaries. Therefore in the spirit of the decisions made by the 13th Party Congress, the recent Plenum of the RCP Central Committee specially emphasized the requirement for higher quality and efficiency in all activities.

The efficiency of production, the degree of profitability and the volume of profits inherently depend partly upon timely procurement of the raw material and energy resources in the right quantities, varieties and quality and partly upon their processing with a high sense of economy, strict observance of the consumption norms, and reduction of the percentage of rejects and wastes. Fulfillment of the plan requires firm measures to secure the technical-material base of production. The tendencies to increase material inputs, to exceed or disregard the approved consumption norms, and to assimilate products requiring greater inputs than the existing ones must also be combatted. The party expects the workers, technicians, engineers, researchers and designers to militate for assimilation of products with higher qualitative parameters requiring lower inputs of raw materials, materials and energy. As Nicolae Ceausescu pointed out, "These reductions are essential to efficient activity, to growth of effectiveness and accordingly to growth of the national income and of the means needed for national development and improvement of the people's general welfare."

In accordance with the guidelines set by the 13th RCP Congress and the approved special program, the plan for next year assigns important tasks to increase labor productivity, which is a critical field for intensive development of the national economy and ultimately for the victory of the new social system and demonstration of its superiority over capitalism. That is why the party calls for special emphasis on more intensive growth of labor productivity in all sectors on the basis of scientific organization of production and labor, mechanization, automation, electronification and robotization of production.

Modern production is in growing need of the contribution of scientific research. Therefore the best fulfillment of the 1986 plan calls for intensified research work and more consistent promotion of technical progress in all fields. There are good specifications for this, but they must be followed and applied with every determination.

In close connection with development of scientific research and promotion of modern equipment and technologies, very serious questions arise concerning improvement of personnel training and of the professional and technical qualifications of personnel. It is no secret that a large part of the defects that still exist in production are due to lags in training of personnel, their technical and professional qualifications, their working spirit, and their sense of responsibility in production. Therefore it is necessary to make a very determined start in implementing the programs for retraining and training the labor force for all activities and in developing the revolutionary working spirit in all fields. As Nicolae Ceausescu pointed out, "Production, quality, technical standards, economic effectiveness and productivity are impossible without highly trained people with good discipline and a sense of responsibility."

Improved Management in All Fields

Good management of the socioeconomic units and better results from any outlays of material, financial or manpower resources heavily depend upon consistent application of the new economic-financial mechanism, of self-management and of self-administration in all activities. Regrettably there are still a number of defects in this area. There are still management councils and managers who think self-management means being able to spend and consume with abandon and resorting to state loans and subsidies.

However self-management and self-administration require every unit to operate on economic principles, to have its own budget, to secure its incomes and accordingly cover the needed production outlays, to maintain a high efficiency and maximum profit, and to give society both what was expended on the respective unit and the due quota for general social development and for strengthening national defense. As the party general secretary pointed out, "Providing for and making profits and duly giving a large part of them to society are integral parts of self-management and self-administration. I think the Romanian financial and economic organs and management councils must make a more determined effort and realize that we cannot speak of any change in the management and administration of the Romanian units without applying the new economic mechanism in this way."

Romanian socialist society is organized and managed on the principle of democratic centralism, which combines uniform management of all sectors according to the Unified National Plan with the extensive initiative of the masses and the workers councils.

Socialist production relations and the whole Romanian social system are based on workers joint ownership and state and cooperative ownership. As Nicolae Ceausescu pointed out, "We must not for a moment forget that the Romanian system, the nation's general development, the living standard, strengthened defense and the advance toward communism heavily depend upon consolidation and reinforcement of state and cooperative socialist ownership!"

Theories are circulating in some countries to the effect that there should be some reduction of the role and importance of workers ownership and some form of encouragement of private ownership. Such theories entirely conflict with socialist principles. The Romanian people have abolished capitalist ownership of the production means forever, as well as the old system of distribution. The great

progress made under socialism and state and cooperative socialist ownership clearly demonstrates that socialist ownership is far superior to capitalist ownership as the only form that provides for every nation's progress, welfare and independence. Accordingly the Romanian people are not going to permit the return or operation of private-capitalist ownership in Romania, in any form or under any circumstances. Of course all workers' feeling of ownership of the common property must be strengthened, while the forms of material incentive are further improved, by the best possible combination of the socialist principle of distribution with every member of society's greater responsibility and contribution to the nation's general development.

The Plenum of the RCP Central Committee stressed the need of regular improvement in the forms of management and planning of all activities. The RCP does not regard them as forms laid down once and for all but as subject to constant improvement. We must always remember that the productive forces, society as a whole, science, culture etc. develop as we progress on the path of socialism and communism. Of course in seeking new forms of management and planning we must always proceed from the socialist principles and the necessity of strengthening and developing state and cooperative socialist ownership.

The new stage of Romania's development calls for greater responsibility on the part of the party and state organs as an objective necessity. The RCP and its general secretary believe that every party or state activist must have a high revolutionary spirit and sense of responsibility to the party and the entire people. Nicolae Ceausescu said, "I am stressing these points because we have encountered a number of bad indications this year as well as the failure of some activists in responsible jobs to act very responsibly in implementing the specified programs and plans. That has happened in the energy field, for example, making it necessary to take the measures known to you. But we have also met with such situations in other sectors too, such as irresponsible laxity in taking the necessary steps to carry out the tasks assigned by the party, the state and the people."

The instances of dishonesty and concealment of the facts from the party and state are particularly serious. Such situations have occurred in agriculture for example.

Good socioeconomic management requires heavy responsibilities and high standards especially on the part of the higher officials in the party and state. Nicolae Ceausescu said, "Those who do not understand this themselves do not belong in the party organs or in the party itself. We are no discussion group. We are a revolutionary party and must remain a revolutionary party, fighting for socialism, for communism, and for the Romanian people's welfare and independence!"

Improvement of management on all levels of the Romanian social system and eradication of the bad situations and phenomena foreign to the revolutionary party spirit require intensified political-educational efforts to form the new man with a revolutionary awareness as a factor vital to the success of all Romania's activity. Any instances of chauvinism, nationalism or racism must be resolutely combatted in all propaganda activity and in the revolutionary communist indoctrination of the party members and all workers. The party expects us to take a firm stand against the efforts of the foreign imperialist and reactionary circles to restore fascism and revanchism and to oppose them with every determination in whatever form they take and wherever they exist. Patriotic education

and the spirit of international solidarity with all progressive, anti-imperialist forces and with all peoples must also be developed intensively in political-educational work.

Disarmament, the Main Wish of All Peoples of the World

In securing the successful solution of the problems of socialist construction in Romania, the Romanian party and state are also taking their place as active elements in the international arena, taking firm and consistent action to solve mankind's great problems in the interest of every people and the general cause of collaboration and peace. Socialist Romania and President Nicolae Ceausescu constantly advocate ending the dangerous course of events and the policy of military confrontation and resuming the policy of detente, collaboration and peace.

The clear and responsible analysis of current international affairs indicates that the main problems of this period are stopping the armaments race and starting disarmament, especially nuclear, and asserting the vital right of people and the peoples to existence, freedom, independence and peace. As we know, the armaments race is still going on this year. New nuclear weapons have been installed in Europe, further aggravating the danger of a world war that would inevitably become a nuclear catastrophe leading to destruction of the very necessities of life on earth. Accordingly the Romanian party and state and Nicolae Ceausescu have been militating further and very firmly for disarmament, for nuclear disarmament on earth and against militarization of outer space, and for peace.

The questions of peace, disarmament, abolition of nuclear weapons, stopping the militarization of outer space, and disarmament in general affect practically all mankind, and they are legitimate objectives and concerns of all nations of the world regardless of their size or social system. Therefore, as it was pointed out at the recent plenum of the RCP Central Committee, Romania together with other states and peoples will redouble its efforts in the future on behalf of disarmament and in defense of peace. All peoples and especially the European ones are vitally interested in doing all they can to eliminate the medium-range missiles and later all nuclear weapons, to begin disarmament and general reduction of troops and armaments, and to stop militarization of outer space.

The facts prove that nothing justifies continuing the military expenditures that are causing great difficulties in all states' national economic development and of course in raising their people's living standard. When a certain balance between the two sides has been reached in the world arena, no considerations whatever can justify continuing the military expenditures and the armaments race. As the party general secretary pointed out, "In our view, if reduction of military expenditures were started, not only the military requirements and those for strengthening confidence would be fully covered but also the economic ones, those for socialist construction, general economic development, and the peoples' greater welfare!"

Accordingly, socialist Romania is very definitely in favor of the progress of the Stockholm Conference, the Vienna Conference and the Geneva Disarmament Conference with the best possible results. They can make a major contribution to progress in disarmament and in bolstering confidence among states. The Romanian state is also advocating and constantly trying to establish a zone in the Balkans

free of nuclear weapons and foreign military bases. Although some questions are still disputed among some Balkan states, Romania considers it in the interest of all the states in this region to settle these differences and work together to form a zone of peaceful collaboration free of nuclear weapons, a zone that will give our peoples increasingly good conditions for development.

The current international situation proves conclusively that every effort must be made to stop the military conflicts and start settling the disputes among states by negotiations alone. Accordingly the new peace initiative of Romania and President Nicolae Ceausescu, the solemn appeal presented and unanimously adopted in the United Nations, has met with an extensive worldwide response.

Many serious problems have accumulated in the world over the years. But as Nicolae Ceausescu said at the recent Plenum of the RCP Central Committee, we can declare without fear of error that the balance of power is such that the present international situation can be changed. If the progressive, anti-imperialist and realistic forces and the peoples everywhere act in complete unity they can change the present course of events, bring about disarmament and assert a policy of peace, peaceful coexistence and collaboration of all nations of the world on an equal footing. As the party general secretary pointed out, "In accordance with the decisions of the 13th RCP Congress and Romania's general foreign policy, which has proved consonant with Romania's interests and those of all peoples of the world, we are determined to work very consistently in the future as well to develop relations with all the socialist countries and the developing countries and with developed capitalist countries and all states of the world, regardless of their social systems. We are determined to do all we can to contribute to the triumph of reason, to disarmament, to peace and to a free and independent future for Romania and all nations of the world!"

The Plenum of the RCP Central Committee of 13-14 November 1985 discussed and approved a series of documents vital to socialist Romania's socioeconomic progress and to the entire Romanian people's socioeconomic progress. It is a duty of honor of every communist and every worker to master the guidelines and tasks set forth in those documents and to work most responsibly and consistently for their implementation and for exemplary fulfillment of the plan tasks for this year as the lasting foundation for the success of the coming 1986-1990 Five-Year Plan, the third stage of the RCP Program for Building the Fully Developed Socialist Society and for Romania's Advance Toward Communism.

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ROMANIA

CEAUSESCU WORK ON MILITARY THOUGHT, PRACTICE

Bucharest ERA SOCIALISTA in Romanian No 22, 25 Nov 85 pp 41-42

/Review by Univ Prof Dr Stefan Lache of the book "Nicolae Ceausescu's Works As the Foundation of Contemporary Romanian Military Thought and Practice" collated by a collective composed of Lt Gen Dr Constantin Olteanu, Lt Gen Dr Iulian Topliceanu, Maj Gen (Researve) Dr Gheorghe Zaharia, Col Dr Florian Tuca and Col Dr Gheorghe Tudor, with a preface by Ion Popescu-Puturi, Military Publishing House, 1985

/Text The book "Nicolae Ceausescu's Works As the Foundation of Contemporary Romanian Military Thought and Practice," published by the Military Publishing House, presents the views of the RCP and its general secretary on national defense, the content and aims of the Romanian military doctrine, and the structure and components of the national defense system. As the Preface states, the book takes its source from the vast creative undertaking accomplished by the Romanian people in the period inaugurated by the historic Ninth Party Congress, "the dynamic, original and profoundly patriotic innovations inspired and led by Party General Secretary Nicolae Ceausescu, president of socialist Romania." (p 7)

The Romanian party and state leader's theoretical works and entire practical activity are fraught with the spirit of receptiveness to all that is new and advanced in the treasury of world science and experience, including military thought and practice. The development of the national defense doctrine in the party general secretary's works has a rich frame of reference in the Romanian people's long experience in fighting for national freedom and independence. The book accordingly emphasizes Nicolae Ceausescu's conception of history as it is revealed in his works as a whole, reflecting his ardent love of country and the people and his high esteem for the progressive historical traditions and their creators, the masses.

In this connection the authors of the book bring out the fact that the Romanian people never harbored thoughts of invasion nor coveted other peoples' lands or wealth under any circumstances, but they staunchly supported their struggles for liberation when needed. Tied to their land and working and living on the fruits of their own efforts, the Romanians never waged wars of invasion in their long history but succeeded in resisting some great kingdoms and empires at the cost

of vast efforts and sacrifices and in preserving their state organization and existence. Meanwhile the long series of battles fought almost without interruption in their troubled history against very strong aggressors experienced in warfare enabled the Romanian people to draw a wealth of conclusions and lessons that they applied according to the particular conditions of the various periods, always adopting suitable strategy and tactics.

We are indebted to Nicolae Ceausescu for reestablishing the truth about the Romanian army's role in the struggle for national freedom, unity and independence. From the host of Burebista to the medieval armies who defeated the foreign aggressors, from the army that fought for the absolute independence of Romania that was proclaimed on 9 May 1877, for state unity and for the victory of the Antifascist and Anti-Imperialist Revolution for Social and National Liberation on 23 August 1944 to the revolutionary army of today, the Romanian army has always been the armed hand of the people, serving their highest interests and aspirations with faith and dedication. In this connection the book brings out, as a characteristic of national history, "the people's rise to battle with arms in hand to defend their existence and independence" and the fact that "Whenever the country was in danger the military defense effort had broad popular support, explaining the resounding victories won against strong and bitter aggressors." (p 49) The fact is also brought out that in many battles for national defense populations of other nationalities fought at the Romanians' side who had settled in course of time on Romanian lands and who, as Nicolae Ceausescu said, "fought together with the native Romanian population to defend their freedoms against feudal oppression and foreign invaders, and for independence and a free life."

The book stresses the great importance of the policies set by the Ninth Party Congress and Nicolae Ceausescu concerning knowledge of the fighting traditions of the working class and the RCP and application of the thought and experience of the workers revolutionary movement in Romania to military theory and practice. In this context the book brings out the Romanian socialists' views on the armed nation and their advanced position regarding the standing army and the need of making it a strong instrument in defense of Romania's national independence and sovereignty. Moreover some very valuable and timely conclusions and lessons are drawn from knowledge and scrutiny of the RCP's military thought, formed in the period between the wars and successfully applied in the struggle against fascism, in the years of antifascist resistance, and especially in the organization and conduct of the Antifascist and Anti-Imperialist Revolution for Social and National Liberation. They are also drawn from analysis of the military experience acquired in the battles fought to liberate the northwest part of Romania as well as Hungary, Czechoslovakia and Austria before the final victory over Hitlerite Germany.

A significant chapter of the book describes the main stages and phases of the democratic revolutionary reform of the Romanian army and the process of placing it on a new, socialist basis. The information in this chapter, some of it little known, reveals the outstanding role of Nicolae Ceausescu in the formation and implementation of the RCP's military policy, especially in the incipient period of socialist construction when he was active in managing the army and had heavy responsibilities in national defense. In that period of radical changes in the nature and structure of the Romanian army Nicolae Ceausescu imparted a new and revolutionary spirit to all army life through his vitality, organizational ability, progressive approach, his close ties with activity in commands and

in units, and his keen sense of observation and synthesis. As the book points out, "Nicolae Ceausescu's activity in the army and later in the higher party administration in the years of laying the foundations of socialism contributed considerably to the radical change in the nature of the nation's military corps, which took on the aspect of a socialist army in all its components in keeping with the requirement of building the new order." (p 90)

The Ninth Party Congress inaugurated an era of radical revolutionary reforms in Romanian society and one of impressive progress in all activities, as well as the beginning of a new stage in the development of national military thought and practice. The chapter on this stage reveals the comprehensive scientific basis of the Romanian conception of defense of the socialist nation and that of socialist Romania's military doctrine and its application in the national defense system and in the intensive development of its material base in 1965-1985. In the treatment and original revolutionary solution of all these far-reaching problems "The essential part was played by Nicolae Ceausescu's social-political thought, which brought about a qualitative leap in the national military corps. (p 96)

The dynamic innovating spirit that all of Romania's social, political, economic and cultural activity has acquired in recent decades and the extensive revitalizing of revolutionary theory and practice have been strikingly reflected in the military field as well. The content of some previous ideas and policies that no longer suited the new historical conditions were reevaluated. A number of mistaken opinions and attitudes denying the role and necessity of the national military doctrine were eliminated, as well as a number of anachronisms that were holding up reinforcement of the national defense capacity in the new historical stage, and the state function of national defense was reviewed in the light of some original ideas based on consistent scientific analysis of the internal and international realities.

The book demonstrates that in one way or another Nicolae Ceausescu scientifically and creatively investigated all the important problems of military thought and practice. The Marxist theory of war and peace was creatively developed this way, the idea that national defense is an inseparable part of socialist construction and a cause and task of the entire people was developed and substantiated, modern military science and art were enriched, etc. The Romanian party and state leader's theoretical works contain theories, ideas and guidelines of outstanding value concerning the dialectical unity of building the fully developed socialist society and strengthening the national defense capacity; the uniform content and main objectives of preparing the country for defense; the principles of organization, instruction, equipment and management of the national defense system; the inalienable right of the constitutional organs of Romania and the RCP to rule on preparation and use of the nation's armed forces and to manage the entire national defense system, and the principles of military collaboration with the Warsaw Pact countries, with all socialist states, with the developing countries and with other states regardless of their social systems.

The contribution of the RCP and Nicolae Ceausescu to the development of military thought was fully reflected in the scientific formulation of the national military doctrine. A work of inestimable theoretical and practical value, the contemporary Romanian military doctrine is determined by the requirements of building the fully developed socialist society and the need of further consolidating

the people's indestructible unity around its leading force, the RCP. As the book says, it is "a unified, harmoniously integrated series of ideas, theories and principles adopted by the Romanian socialist state and the entirety of its options concerning organization, equipment, preparation and management of the forces and means for armed defense of the people's socialist gains and the nation's independence, sovereignty and territorial integrity against any aggression." (p 107)

Reflecting the Romanian people's interests and aspirations (national freedom, independence and sovereignty and the right to create the society and way of life that they wish), interests and ideals that inspire all the peoples and all the progressive social and political forces in the contemporary world, the Romanian military-political doctrine enjoys a wide audience and international esteem.

The binder of the whole fund of policies, options, theories and principles of the Romanian military doctrine and the factor for the cohesion and dynamism of the national defense system is the fundamental principle of management of the forces and means that make up the armed power of the nation and national defense by the RCP, the leading political force of Romanian society and the vital center of the nation. All important decisions on national defense, development of the nation's military potential, and use of the armed forces are made by the higher party administration. The party leadership regularly analyzes the activity of the army and the other arms of the defense system, formulates conclusions, takes appropriate practical measures, and constantly guides and strictly controls implementation of the party decisions and national laws on military subjects.

The local defense councils, deliberative organs with the task of solving defense problems on the county, municipal, city and communal levels, were formed in order to improve the management of national defense. The Defense Council, a party and state organ chaired by the party general secretary, president of the republic and supreme commander of the armed forces, Nicolae Ceausescu, was constituted on the national level as the supreme authority for military-political management. It is the sure guarantee of consistent implementation of party policy in the military sector and of harmonious social integration of the armed forces.

In the party general secretary's view the new Romanian army, as an integral part of the nation, a school of political, patriotic and revolutionary education, and a vital institution of the socialist state, has the noble mission of defending the people's revolutionary gains and the whole nation's freedom, territorial integrity, peace and security. The Romanian army does not and cannot have any purpose but to serve the national interests and the cause of socialism and progress. Reflecting the people's peaceful bent, it will not participate under any circumstances in any war of aggression, it will not threaten any other people's freedom, and its solely defensive character has always been its fundamental characteristic trait.

While performing its particular missions and tasks, the Romanian army is also actively engaged in the entire nation's constructive effort. Just as the workers combine productive activity with military training, the troops combine political and combat training with participation in the whole effort toward national socio-economic development. They have been contributing to the construction of important industrial and social-cultural capacities, to development of the nation's

energy reserves, to construction of irrigation systems and the Danube-Black Sea and Trans-Fagaras canals, and to other economic activities as well. Meanwhile as citizens with full rights the soldiers participate along with the workers in social-political affairs and in solving the major problems affecting socialist Romania's present and future. The army is also active in Romanian society's intellectual life, in scientific research and in national cultural development. The soldiers' share in production of society's material and cultural values strengthens their resolve to defend them at any sacrifice. Nicolae Ceausescu pointed out that this is natural because the army is an integral part of the heroic builders of socialism in Romania, and by virtue of its very structure and composition it is an integral part of the people as their armed detachment.

It is one of the major aims of Romanian military thought and practice to create and develop, on the basis of the nation's growing economic strength, the national output of technical combat means for the modern equipment of the forces of the national defense system. In speaking of the party's and state's efforts in this direction, the book mentions Nicolae Ceausescu's view that consolidation of national sovereignty and independence necessitates procuring out of domestic resources the military equipment that will enable the army to accomplish any combat mission in keeping with the principles of the national military doctrine while also using the results obtained in this field on the world level. Concluding that the material and financial outlays to equip the army are fully justified, being made purposefully by the Romanian people to protect their peaceful work and the nation's sovereignty and independence, the book emphasizes the RCP's policy of keeping the military outlays within rational limits that will not impair national economic growth or improvement of the people's living standard. Nicolae Ceausescu said, "It would be a great mistake to opt for huge allocations for armament because they would diminish the possibilities of national socioeconomic development and interfere with the program to improve the people's welfare, and therefore in the long run they would not strengthen the defense capacity but weaken it." The ratio between enhancing the nation's economic strength and consolidating its defensive capacity is rationalized by implementing the party policy of rapid industrial development, rational geographic distribution of the productive forces, agricultural modernization, expanded scientific research, faster introduction of technical progress in all economic sectors, better use of national resources, and improvement of the quality and effectiveness of all socioeconomic activity.

By its entire content, scientific approach and patriotic-educational potentials this book takes its place as a prestigious achievement of Romanian research in the social-political and historical sciences. It substantially contributes to the record of the Romanian party and state leader's priceless contribution to the development of Romanian and worldwide military thought and practice and of the military art and science.

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ROMANIA

MORAL, POLITICAL VALUES OF SOCIALISM

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/Article by Nicolae Culic: "The Moral-Political Values of the New Order As a Spur to Romanian Socialist Society"

/Text/ The chief strategic objective set by the 13th RCP Congress for the beginning of the third stage of the RCP Program for Building the Fully Developed Socialist Society and for Romania's Advance Toward Communism is to continue, on a higher level, the revolutionary changes in all material and cultural walks of life. The adoption of the ideological program as an integral part of the RCP Program is particularly important in this connection because its chief aims have a telling effect on the development of the whole set of values of Romanian socialist society. As Nicolae Ceausescu pointed out in his report to the Romanian communists' high forum, "Throughout the whole political-educational effort to form the new man we are going to emphasize revolutionary socialist patriotism, love of country, sense of responsibility and dedication to the people and their revolutionary gains, and determination to fight and work for socialist and communist construction, for further improvement of the people's material and cultural welfare, and in defense of Romania's revolutionary gains, independence and sovereignty."

Increasingly strong reinforcement of the sense of responsibility, honor, discipline, order and the high moral-political values characteristic of the new man are objective necessities in the new stage of Romania's development. As the party general secretary pointed out in his speech at the recent Plenum of the RCP Central Committee, every communist and party or state activist and all workers must be imbued with a high revolutionary spirit and sense of responsibility to the party and the entire people because political-educational work must be intensified and the masses' advanced socialist awareness must be improved as a major spur to Romania's rise to new peaks of progress and civilization.

The Values of Socialism Reflect the Superiority of the New Social System

Making social development a purposeful process for the first time in history, socialism is the objective structure favorable to formulation, implementation and consolidation of the values characteristic of the new social system and to assertion of the principles of socialist ethics and justice and the socialist

way of life. The existing coordination of human needs and aspirations with the objective requirements of historical development and that of general with private interests make purposeful formulation of this new set of values possible.

The process of formulating the moral values characteristic of socialism underwent an unprecedented expansion, particularly in the period since the Ninth Party Congress, which inaugurated a new era in Romania's socioeconomic development and unleashed the creative energies of the entire people. Reflecting real human needs and the individual's new attitude toward social reality, these values reflect the requirements and aspirations of Romanian socialist society, which is opening up unlimited possibilities for the increasingly effective advancement of its members in all social activities.

The appearance and development of the values generated by the new social system (revolutionary socialist patriotism, love of and dedication to the party, unity of the people around the party, protection and development of socialist property, mutual aid and respect, the militant revolutionary spirit, and solidarity with the advanced, progressive forces everywhere) reflect, in the set of values, the material and cultural changes that have taken place in society and the capacity of socialism to lend the culture a higher distinctive form.

The realities of experience have demonstrated by virtue of the facts that workers joint ownership is the only way to intensive development of the productive forces, improvement of the people's welfare and standard of civilization, and progress via socialism toward communism. Accordingly, as Nicolae Ceausescu pointed out at the Plenum of the RCP Central Committee of 13-14 November 1985, a greater effort is necessary toward more and more intensive development of the sense of responsibility for development and protection of socialist property, emphatically rejecting any tendency to diminish the role or importance of workers joint ownership. Such tendencies or theories completely contradict the socialist principles and the fact that the Romanian people have abolished capitalist ownership of the production means forever.

Reflecting the entire people's deep devotion to their country and the RCP, their advanced attitude toward work and their high sense of responsibility for their social obligations, revolutionary socialist patriotism is a characteristic of advanced socialist awareness and a fundamental value of Romanian society's intellectuality. It reflects the workers' determination to protect and develop the socialist revolutionary gains and to militate for Romania's general progress and for the entire people's greater good.

Of course, like the other values of the new system, socialist patriotism does not about automatically, by itself. It is formed and developed by regular political-ideological and cultural-educational work combining the efforts of many elements under the RCP's leadership. As Nicolae Ceausescu pointed out on this very subject, "Romania's political-educational effort must concentrate on developing revolutionary patriotism and love of country, the people and the socialist cause."

The new set of values embodying the workers' loyalty to the characteristic realities and institutions of Romanian society and to the RCP's policy and ideology are characterized by an inner coherence and a uniform significance stemming both from the social ideal they reflect, namely the communist model of social organization, and from the elements forming the nucleus of the entire set, namely the

values of revolutionary scientific ideology. Since the advanced values promoted by the working-class ideology form the nucleus of Romanian society's set of values, the party general secretary stressed the vital task of developing "every citizen's own moral values and human qualities, but in close correlation with the philosophical thought and revolutionary social ethics characteristic of the new Romanian socialist and communist order."

On the basis of these characteristics, the set of values of the new order unify the entire people's activity in order to carry out the strategic objectives of the revolutionary process that is under way. Through the values and standards that it institutes, Romanian society keeps social activity within the objective laws and eliminates the factors that could cause anomalies and defects. Instituted by the revolution and materially guaranteed by the social and production relations, the socialist values and standards are the requirements for forming the new socialist social awareness that acts as a spur to participation of all members of society in community activity. Of course the active, reforming influence of the new order's values on behavior and action, reflected in greater efficiency in all activities, would not be operative if it took the form of aspirations or ideals alone. Individual aspirations to equality, freedom and justice, values with no real possibilities of fulfillment in a society based on private ownership, find in socialism the objective structures favorable to their actual fulfillment. Consequently the values accompanying these aspirations become real values instead of ideal ones, as well as essential features of all workers' thought and action.

Socialism completely unites the scientific and the moral-political values within the framework of the set of values it promotes. That unity brings about a permanent correlation among all the requirements of economic growth, the development of science, and the moral-political ends of society. In serving the humanist aspirations of socialism, science accomplishes its own social mission as a basic support of progress. As the party general secretary said on this subject in his Address to the Plenum of the RCP Central Committee and the Main Party Activists in July 1985, "The best implementation of the decisions of the 13th Party Congress and of the RCP Program requires redoubled scientific research work so that Romanian science will play an increasingly active part in general national development and contribute to the general progress of world science."

The process of formulating the socialist set of values and asserting it more and more effectively is a very far-reaching undertaking, reflecting the continuity of the revolutionary struggle in the whole process of socialist and communist construction. Consequently the revolutionary spirit is a basic form of existence and expression of the values of Romanian socialist society and a vital prime requisite for their development.

Accordingly the revolutionary spirit is essentially determined by the attitude toward the socialist set of values and by adherence to it and assumption of responsibility for defending and enriching it. It is a basic value of advanced socialist awareness that is and must be implemented in practice and in action through the increasingly effective assertion of the principles and standards of socialist ethics and justice and the new and higher social values of coexistence in Romanian socialist society. Hence also the requirement, repeated stressed by the RCP, to do more and more regular ideological and political-educational

work that will develop the advanced traits of revolutionary socialist awareness in all ways. The new man, indoctrinated in the revolutionary spirit of the new order's values, is a fully developed personality with high ideological, professional, scientific-technical and cultural qualifications, dedicated body and soul to the cause of socialism and socialist Romania, tirelessly militating for implementation of party and state policy, a determined fighter against all that is outmoded and interferes with social progress, and a staunch promoter of the new. He must display a high sense of responsibility and high standards throughout his activity and make a regular effort to take the necessary steps to accomplish the tasks assigned by the party, the state and the people. He must serve as an example of honor, discipline and order, consistently carry out the party's decisions and the laws of the land and militate for their strict observance. Instances of dishonesty, concealment of facts from the party or state, irresponsible performance, disregard of decisions and the nation's laws, concealment of bad situations, and misrepresentation of facts conflict with the principles on which the activity of the Romanian party and state is based, with the standards of socialist ethics, with the moral-political makeup of the communists and workers, and with the standards of the new revolutionary socialist awareness.

In this all-inclusive view, the revolutionary spirit is both an essential value of Romanian society and a spur and a prime mover of the whole process of socialist and communist construction. As Nicolae Ceausescu said, the great aims of the present stage of Romanian society's development are feasible only by uniting the entire people's creative effort "with the revolutionary spirit, with communist indoctrination, and with the revolutionary approach to work and all activities."

Profoundly Humanistic Nature of the New Order's Values

Through the purpose of its social action, namely all-around development of all members of society, socialism lends the set of values a profoundly humanistic character. As the party general secretary has pointed out, revolutionary humanism is "the principle that focuses all social activity on the individual and his dignity, equality, social and national justice, full equality of rights among all workers of all nationalities, and fulfillment of the highest ideals of the creators of material and cultural values."

The humanistic purport of the socialist set of values appears both in the individual's position as the supreme value in the set and in the nature and functions of all the values, which have now become the means to fulfillment and all-around development of the human personality. The profoundly humanistic nature of Romanian socialist society's set of values is also reflected in the moral values that it promotes, namely the spirit of justice, equity, honesty, dignity and confidence in man's ability to improve himself.

As a working society wherein every member devotes his own creative powers to the general development, socialism permits unrestricted development and fulfillment of individual creative powers. By freeing work from exploitation and alienation the new order makes it the chief source of socioeconomic development and of the entire nation's prosperity, as well as the sole factor for progress and the chief means of developing the personality and every citizen's creative power. Work is also the sole criterion for judging the contributions of the members of Romanian

society to its progress and for determining the individual's position in society. Because of that function work is of primary importance in the set of social and individual values.

Socialist ownership converts work from a dehumanizing and alienating medium to one of fulfillment of creative power and a telling humanizing factor, and the aims of socialist society also make changes in the position of work. As soon as the individual becomes the aim of all social activity, while work is the essential human characteristic, naturally the individual will develop and be fulfilled through work. Therefore under socialism work becomes a vital necessity for both society and every member of it. By virtue of its objective characteristics and the nature of the human relations among which it is performed, work is now inseparable from the origin of the new material and cultural values that are to characterize all workers' performance. At the recent Plenum of the RCP Central Committee Nicolae Ceausescu said, "Production, quality, technical standards, economic effectiveness and productivity are impossible without highly trained people with good discipline and a sense of responsibility."

Since in socialism work is the sole source of the people's progress and prosperity and the one criterion for judging and determining every citizen's position, as well as the main means of self-improvement, the party concentrates partly on providing for more and more complete application of the workers' creative power, initiative and intellectual and physical capacities and partly on educating all citizens through work and for work. The attitude toward work and understanding of its moral necessity and of the fact that it is only in work and through work that the individual can apply his creative power and become a purposeful builder of his own history are both factors encouraging creation and promotion of the values and means of checking and evaluating the existing set of values.

Socialist society is based upon a truly democratic and revolutionary existence because it sets out to release the masses' creative powers and to provide for all-around expression and fulfillment of the personality in all activities as a basic component of its set of values. Socialist democracy guarantees the masses' widespread participation in social management, decision-making, and organization and control of social activities, and it is the means whereby social relations are harmonized among people, between individuals and society, and between the members of microsocial and macrosocial communities. Comprising all state and public social organizations and institutions as well as the democratic principles and standards basic to all social activities, workers revolutionary democracy is characterized by a close unity of its economic, political and social-cultural aspects.

Democracy is inconceivable under socialism unless all fields of activity are on a scientific basis and correlated in a uniform system, fields wherein the individual-society synthesis is effected in various respects. Assurance of the broadest civil rights and freedoms stimulates the masses' creative powers and favors development of all individuals' initiative and increasingly intensive growth of the personality. As a value, socialist democracy is accordingly a means of rationalizing and improving socioeconomic activity and of raising the entire people's general standard of training and culture. Broadening and developing workers revolutionary democracy and improving the forms of mass participation in management of the Romanian socialist order stimulate and make more and more complete

use of the masses' creative energies and enthusiasm and create the climate essential to full development of the personality and all society's accelerated progress.

Democracy is not only the structure indispensable to the process of creating the values in all its aspects but also the means of integrating the created values in behavior and generalizing them throughout society. In this twofold form workers revolutionary democracy generates particular values and enhances values with a qualitatively new content of freedom, responsibility, legality, competence and order.

Socialist equity is another chief value in Romanian society's set of values which reflects society's effort to give equal opportunities to all its members while correlating, to be sure, exercise of the rights with fulfillment of the obligations. By virtue of its own nature and in view of the dialectical connection between the general basic interests of the members of society and their private interests, socialist society brings about equity in all activities, economic, political and legal, just as it achieves a higher dialectical unity of the forms of economic, political, legal and moral equity.

In Romanian society the standards of socialist equity govern the evolution of the other values, while equity is in its turn dependent upon promotion of the new political, legal, economic and moral values generated by socialist production relations, the technical-material base, and socialist awareness. Within the new set of values equity is a benchmark to which other values are regularly referred to determine their truly humanistic content. Since it functions as a chief value socialist equity has many meanings, among which the ethical one predominates of course and governs social relations in their entirety. Therefore the struggle against injustice for an equitable social system is an integral part of socialist construction and is profoundly revolutionary in nature, creating new relations based on respect and collaboration.

As it develops its role as a leading social force, the working class is making solidarity among all workers one of the main values of the new order. Its content comes from the very nature of socialist relations, which are characterized by respect, mutual aid, confidence and collaboration. The role of solidarity as a major value in the socialist set of values is objectively determined by the radical changes that have taken place in the Romanian social structure and in the citizens' living conditions, and also by the increasingly pronounced emergence of the party as the vital center of the entire nation and a leading political force that unites and inspires creative energies and around which the entire people's social solidarity takes effect. Romanian society today is composed of friendly social classes and categories having vital interests in common and actively participating in production of material and cultural values. These classes are gradually being leveled as regards living and working conditions. Reflecting the complete unity of the individual and the community as well as the unity of society as a whole, "Socialist solidarity is essential to the nation's development as well as its independence, welfare and happiness," as Nicolae Ceausescu has pointed out. It determines the entire people's unity of ideals and aspirations as well as the unity of the practical effort that is being made to fulfill them through collaboration and mutual aid, through the common effort toward construction of the fully developed socialist society and the advance toward communism, and through dedication to the party's cause.

Educational Potentials of Socialist Society's Values

Ultimately determined by social practice and reflecting the changes in society's living conditions, the set of values in turn affects the society that generates it and contributes in its own ways to the satisfaction of society's requirements and to its progress. Through its attachment to the real structures of socialist society, which have a new purpose of free and all-around development of individuality, this influence acquires a profoundly humanistic, practical and militant character and helps to form the new man in the spirit of collectivism, of the new communist attitude toward work and public property, of revolutionary militance, of socialist patriotism and of international solidarity.

Present in all aspects of social action, Romanian society's set of values is characterized by functional unity in that both its components and its entirety contribute uniformly to enrichment of the human condition and to the well-rounded formation of the individual. The formative function of the set of values, which is enhanced in socialism by society's undertaking to develop its members, lies in its capacity to help produce the new kind of personality and the new models of behavior that can offer the individual more and more opportunities to broaden and improve his makeup. When it is exercised in direct connection with formation of the individual as an active personality and a purposeful participant in socialist construction, the formative function of the set of values involves two interdependent processes, that of integrating the personality and the man in the entirety of social existence and that of individualizing and differentiating him in society. There is a constant interaction between the set of values and the personality, in which the individual is both the creator and the beneficiary of the values.

Integrating the individual in the living conditions of socialist society actually means integrating him in the conditions of his own existence, since that society is the one that is fully suited to assertion of the personality and human dignity. The integration that socialist society accomplishes through its set of values is opposed to isolation of the individual from the community. As the RCP Program points out, "The personality is not lost amid the masses but advances more and more effectively as the whole nation advances." Ceaselessly militating for application of the humanistic standards of the set of values and for practical implementation of the basic values of socialism, the man of Romanian society is constantly revolutionizing the structure of his personality, enhancing his awareness, and improving himself continually in order to carry out his mission in the renovation of society.

It is particularly important in this connection to redouble the efforts toward political indoctrination of the workers and increasingly intensive promotion of the advanced concepts and attitudes, while resolutely opposing any backward manifestations of chauvinism and nationalism, which are degrading to the human being. And it is also necessary, as Nicolae Ceausescu has pointed out, to firmly combat the attempts of the foreign imperialist, reactionary circles to restore neofascism and revanchism and to reject such manifestations wherever they occur.

For communists, for revolutionary youth and for all workers of Romania, Romanian socialist society's set of values is a theoretical and practical answer to the far-reaching problems of forming and developing the new man in the present stage.

While the values justify and signify the acts, it must not be forgotten that the values in their turn can be implemented only through the acts and behavior. In view of the reciprocity and unity of the acts and the values, the RCP is making a sustained political-ideological and educational effort toward theoretical comprehension of the advanced values and their general application in practice as well, requiring party members and all workers to form their firm communist convictions and govern their conduct according to those convictions.

Under socialism the moral values are autonomous and differentiated but focused on and subordinated to the social-political values. While keeping their own identity and purpose, the ideological and political values of socialism also enter into the field of ethics. These values postulate the ideal of abolishing exploitation, social injustice, national inequality and human alienation. The moral values are supported by the ideological and political values, and the latter find their counterpart and the source of their growing assertion in the humanism of the communist principles of living. This trend toward synthesis of the values, a synthesis that stems from coordination of the values with the social ideal, seeks complete fulfillment of man's nature. Therefore, as Nicolae Ceausescu pointed out, political-educational work must consistently bring out "the superiority of the system of socialist relations and that of the principles of socialist ethics and justice and of equality of rights among all Romanian citizens."

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SCIENCE AND TECHNOLOGY

POLAND

STATUS, GROWTH PROSPECTS OF SPECIALTY MACHINE TOOLS INDUSTRY

Warsaw MECHANIK in Polish No 4, Apr 85 pp 209-216

[Conference paper by Z. Debicki, "Mechanicy" Machine Tools Factory, Pruszkow, submitted for Fifth National Machine Tools Conference (Warsaw, 16-17 May 1985): "Special-Purpose Machine Tools, Their Importance in Manufacturing, and Problems Associated With Their Fabrication in Poland"]

[Excerpts] The term "special-purpose machine tools" applies to a very large group of machines, hence its ambiguity. In order to more closely define the scope of the subject, the machines will first be broken down into their basic subgroups:

--machine tools designed to perform specific operations on closely defined objects, i.e., according to a design drawing or on several objects of standard sizes or variations; as a rule, special-purpose unit-construction machine tools or in-line transfer machines are fabricated for this purpose;

--machine tools, called "specialty tools", which were basically adapted from universal machine tools by adding attachments to perform closely defined operations on a narrow group of parts, or to perform operations which they could not previously perform; for example:

a) grinders to grind coned seats in machine tool spindles, based on universal internal grinders,

b) planers to plane curvilinear surfaces in two reciprocating perpendicular directions, adapted to perform these operations by using auxiliary equipment.

--machine tools constructed especially to perform closely defined operations in specific groups of objects; within the scope of these operations such machine tools demonstrate a certain universality in that objects of a given type can be made on them, as well as objects of various designs and in various sizes; for example, milling machines or grinders to make flutes in tools.

Such special-purpose machines may include certain groups of machines which differ one from another depending on other features of the products for which they are intended, or depending on the technological process employed. For example, grinders used to make flutes in drills are special-purpose machine

tools which can be called standard special-purpose machine tools or catalog special-purpose machine tools. It must be stressed that the breakdown given is to a large degree arbitrary and was used to limit the range of machine tools which will be discussed. In some cases it is hard to make a definite delimitation. This happens often in the case of specialty and standard special-purpose machines.

Present Status and Problems in the Development of Standard Special-Purpose Machine Tools in Poland

Up to now, the number of standard special-purpose machine tools fabricated in Poland has been relatively small, although many examples of their fabrication can be cited.

The largest producer of standard special-purpose machine tools in Poland is the Machine Tools Factory in the Raciborska Forging Shop, which fabricates special-purpose machine tools for railroad rolling stock. The Machine Tools Factory in Poreba makes some standard special-purpose machine tools. These are primarily heavy machine tools for the metallurgical and paper industries. Two unit-construction machine tools factories, i.e., FOS Wiepofama and a factory in Warka, have also fabricated special-purpose tools which can be included in the standard tools category. A small number of special-purpose machine tools were also made in the Central Machine Tool Design Office, e.g., milling machines for turbine blades. In almost every machine tools factory during the postwar period such types of tools have been fabricated. For example, recently a milling machine for optical glass was designed and constructed in the KOPROTECH Design Office. Generally, except for the examples cited, the machine tools industry did not fabricate many special-purpose machine tools. Preference was given primarily to the production of universal machine tools. Neither was fabrication of special-purpose machine tools by factories for their own needs very widespread, despite the fact that many good examples can be cited. In KPN-Vis machine tools for the production of cutting tools were made, and in FPIU Bialystok tools for the production of lathe chucks were fabricated. In the roller bearing and automotive industries special-purpose machines were built and this activity continues to be expanded. The HCP Machine Tools Factory also fabricates special-purpose machine tools for its own needs. But all in all, this activity has not been sufficiently developed.

The small enterprises which specialize exclusively in the fabrication of special-purpose machine tools, so popular in the industrialized countries, are almost nonexistent in Poland. We can name only the UNIMA enterprise in the electronics industry. It should be emphasized that the small plants have particularly favorable conditions for the production of special-purpose machine tools which are relatively simple but appear in a large number of types and variations, or are produced in very small lots, often only a couple of units. The numerous and small designer groups can demonstrate their creativity, and the fabrication of small lots is much easier than in the large plants where an expanded organizational structure favors large-lot production, both because of costs and management efficiency.

In the final analysis, therefore, the production of standard special-purpose

machine tools in Poland appears to be very pessimistic, despite the fact that this subject is not foreign to our industries and there are certain skills in this area. Nevertheless, in terms of quantity, production in Poland of these kinds of tools is still definitely too low. Most of the standard special-purpose machine tools used in our industries come from abroad. Considering the fact that their use in production is unavoidable and the possibilities of importing them are not good, their production must be greatly expanded if we are to avoid a situation in which production of various items will have to be restricted because the present machines are worn out and must be removed from service.

It is obvious that there is no way that all of the necessary special-purpose machine tools can be produced. Even the most industrialized countries, with the best-developed machine-tools industry, buy their machine tools from the producers which make the best current offer. We should strive to fabricate more of these machine tools in Poland so as to greatly reduce imports.

The incentive to produce standard special-purpose machine tools is economical--the savings which can be achieved in making them. The following figures can be used for comparison. The amount obtained from sales of conventional, domestically produced machine tools, per 1 kg, is about 500 zlotys, and in the case of a complex, high-grade, numerically controlled universal machine, approximately 2,000 zlotys. However, for 1 kg of an imported, special-purpose standard machine tool, we must pay 7,000-15,000 zlotys (figures taken from several cases examined).

Therefore, the stimulating factor in the expansion of production of standard special-purpose machine tools should be economic reasons. Based on the examples given, it can be said that expansion of such production in Poland is fully possible. But certain organizational measures are required.

In the case of production plants which undertake fabrication of standard special-purpose machine tools for their own needs, the value of the machines fabricated and the profit obtained in their fabrication should be added to the value of the plant's basic production and to the entire generated profit. This would constitute an incentive for such activity, especially since the amount of profit per worker would be greater when special-purpose machine tools are produced. Regardless, it would be well to have existing and new organizational maintain their own accounts, so that this activity would in no case be charged to the plants, but on the contrary, it would be a source of additional benefits.

Another course of action should be the creation of conditions by which new, small production plants could be established which would concern themselves exclusively with the fabrication of special-purpose machine tools. But we can anticipate that the establishment of such plants will not be a speedy process. However, the scientific-engineering centers, which already exist and which often have an engineering staff able to undertake such a task, should begin to fulfill this role. As a rule, the only obstacle here is the shortage of experimental plants. We often find that engineering documentation is available, but there is a shortage of people to do the work. Wage adjustments should help to quickly solve this problem.

The next problem is that of increasing the interest of factories of the machine tools industry in the production of standard special-purpose tools. Past efforts to fabricate universal machine tools, produced in large lots, has always made it possible to obtain large-amount plans and facilitated organization of production. Production in small lots or even in single units is much harder, and if it is to be profitable to the plant, it should ensure a much higher percentage of profit. This is an indispensable condition, which under the present circumstances might incline machine-tools factories to even set up separate departments for the production of special variants of machine tools now being produced, or even entirely new types.

It should be emphasized that all new technologies and new ideas to implement them with the certainty of increasingly better quality of performance and higher productivity, are inseparably linked with special-purpose machine tools. The establishment of the largest possible number of centers which would fabricate such machine tools, will be an essential, attainable and longterm factor in the development of technical progress in the machines industry. Special-purpose machine tools are also a source of profitable export, because to a large extent this is the export of technical ideas.

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SCIENCE AND TECHNOLOGY

POLAND

PRODUCTS, EQUIPMENT OF PONAR-JAFO MACHINE TOOL PLANT PROFILED

Warsaw PRZEGLAD TECHNICZNY in Polish No 12, Jun 85 pp 21-23

[Excerpts] The Jarocin Machine Tool Plant PONAR-JAFO is observing its 40th anniversary this year. The plant is known and recognized both here and abroad as a producer of milling machines. Each year it produces 600 to 800 machines. Last year this production was valued at 1.3 billion zlotys, 80 percent of which was in export. PONAR-JAFO products are highly regarded. Of the socialist countries, the principle buyers are the USSR, the CSSR, Bulgaria and Hungary, and of the capitalist countries, Iran, Sweden, Finland, Great Britain, Canada, Italy, Austria, Turkey, Greece, and others.

Continual Improvement in Construction

We asked Stefan Roszak, assistant director for engineering, and Henry Stawowy, chief design engineer, to describe the plant's production program. The plant has maintained its position among world leaders because it has been manufacturing milling machine for 27 years and has been continually modernizing them. The following machines are currently being produced:

--milling machines in the FD 32 family, including FWD 32 horizontal machines, FYD vertical machines, and FWD 32J horizontal machines with self-driving beams;

--milling machines in the FH 32A family, including FWM 32A, FYH 32A and FWM 32JA machines which operate with stop cycles, and as an alternate, manually controlled machines in these three types;

--FYN 50 M numerically controlled milling machines; and

--special equipment for the milling machines produced.

The FWD 32 universal milling machine is designed for light and medium milling jobs. Its universality and the ease with which it can be re-tooled allow it to be used in machine tool shops and for repair or machining of parts in small or medium lots. The large range of feeds and rotation speeds makes it possible to machine different types of materials economically. The machine tool is controlled from a fixed console. For better control in machining and for easier servicing, a mobile console, which is a special-equipment item, can

be used. Typical dimensions are: working surface of table, 315 x 1,250 mm; maximum table movement: longitudinal, horizontal and vertical, 850, 235 and 420 mm; spindle taper, ISO 40; spindle speed range, 56-1,800 rpm; feed speed range: longitudinal, horizontal and vertical, 11.2-1,120, 9-900, 4.5-450 mm/min.; spindle drive motor power, 5.5kW; machine tool weight, 2,280 kg.

The FYD 32 vertical milling machine has similar operating qualities. Its high rigidity permits high-production machining with milling heads. Machining accuracy ensures seating of spindle heads on precision roller bearings. Depending on the type of machining, it is possible to use spindles with an ISO 40 or ISO 50 taper. Maximum table movement, longitudinal, horizontal and vertical, is 850, 250 and 440 mm, respectively.

The FWD 32J universal milling machine is a tool in which the universality of milling machines in the FD 32 family was further increased by using a self-drive beam. Use of the beam makes it possible to machine the same as on a vertical and horizontal milling machine. The heads which can be used, i.e., for vertical and slant milling, or the universal head, are, just as in the vertical machine, very rigid. They make it possible to machine with slotting mills as well as face mills. The turning angle of the head for vertical and slant milling is plus or minus 45 degrees, while the turning angle of the universal head is arbitrary.

Special equipment for FD milling machines:

--FCZ 1 universal milling head (spindle head rotation speed, 56 to 1,800 rpm; spindle taper, Morse No 4; angle in the vertical plane and spindle angle, 360 degrees),

--FJDB 250 universal dividing head with expanded indexing range (largest diameter of workpiece, 250 mm; spindle taper, Morse No 4; worm gear ratio, 1-40; indexing range, 2-400,000),

--FWHu gear train swing-frame box (number of exchangeable gears, 14; screw-groove cutting pitch range, 6-8,000),

--turn table with mechanical drive (table diameter, 250 mm),

--FCJ 1 slotting attachment (highest slide travel, 80 mm; opening for attaching tools, 17 x 17 mm; maximum attachment turning angle to vertical position, plus or minus 20 degrees).

FH 32A milling machines operating in stop cycles are designed for light and medium milling jobs. They are used widely in medium- and large-serial production. Machining in automatic oscillating cycles entirely eliminates the time lost in changing workpieces. The hardened guides in the console and stand prolong the life of the machine while ensuring machining accuracy, and the lead screws used ensure accurate and highly productive machining. These milling machines are produced in three different types:

--FWH 32A and FXH 32A universal vertical (table working surface, 315 x 1,259 mm; maximum table movement: longitudinal, horizontal and vertical, 900, 300

and 450 mm, respectively; table turning angle, plus or minus 45 degrees (in the FWH 32A version); spindle taper, ISO 40; spindle speed range, 56-1,800 rpm; slide speed range: longitudinal, horizontal and vertical, 11,2-1,120, 11.2-1,120, and 2.8-280 mm, respectively),

--FYH 32A vertical machine (spindle taper, ISO 40 or ISO 50; head turning angle, plus or minus 45 degrees),

--FWH 32JA and FXH 32JA universal machine with self-driving beam (table turning angle, plus or minus 45 degrees (for the FWH 32JA version); spindle head taper, ISO 40, main spindle taper, ISO 40).

Special equipment for FH 32A family milling machines. This equipment is similar to that for the FD machines, differing only by the diameter of the turn table (315 mm) and the slotting attachment slide travel (100 mm).

Based on the FH milling machines, FH 32/40N numerically controlled machines are also being produced. Any control system may be used, with continuous or intermittent control. These milling machines are especially useful for making injection molds and dies.

This year serial production was begun on a manually controlled milling machine, FH 40. These machines use a 400-mm wide table, spindles with ISO 50 taper, and the slide control system was modernized to improve working conditions. The remaining parameters were not changed.

Also this year serial production was begun on a numerically controlled knee-type milling machine with a slidable fixed headstock. These machines were designed for medium-run milling jobs and are widely used in unit- and medium-serial production. They are particularly useful in machine tool shops for production of dies and punches. The work of the fixed headstock is performed by a self-driving beam and a vertical head, moved mechanically over the vertical ways of the stand. The spindle head with an ISO 50 taper is driven by a 5.5Kw asynchronous motor through a 15-step speed box with manual selection of rotation speed. The slides, lengthwise of the table, vertical of the console, and crosswise of the beam, are driven independently by three d-c motors with permanent magnets, controlled by thyristor regulators. The milling machine is equipped with an automatic lubrication system with feeders. Some typical data: Table working surface, 500 x 1,840 mm; spindle rotating speed, 45-1,400 or 56-1,800 rpm; Spindle axis turning angle from vertical, plus or minus 45 degrees. Any numerical control system may be used to control the machine. This year, this type of milling machine will be produced with Numeric (GDR) controls, and on special order, with Heidenhain (FRG) controls. In 1986 a beam with an infinitely variable drive or hydraulic selection of spindle rotation speed will be produced.

Also, next year the FH 32A milling machines will be replaced by FH 32/40P machines, in which control through relays will be replaced by a programmer. The program, contained in an electronic memory, will be retained for 100 hours after power to the machines is turned off. An automatic intermittent cycle of any sequence permits machining of parts located in many places on the milling machine table and multilayer milling in various planes.

The fabrication of an FXM 32NM prototype multi-operational machining tool based on documentation developed by the Milling Machine Research and Design Center in Pruszkow will be an important topic next year. Many innovations have been included in this design, which makes it one of the most modern types of this equipment produced in the world. The next stage in the development of this design will be an ASOK 320 body parts machining station. The PRUS numerical control system will be used or some other systems.

Documentation for a new family of FR 32/40 and FR 40 NC milling machines has been prepared in the plant's design office. These new milling machines will replace the present FD 32 and FM 32/40 machines in the near future. This family comprises manually controlled milling machines operating in automatic cycles (as jobbing machine tools) and numerically controlled machines. The first of these milling machines, in the numerically controlled version, will be manufactured next year.

Current Manufacturing Techniques

The development of manufacturing technology, says Bogdan Kuberka, chief production engineer, is closely linked to the construction and range of the products which will be fabricated in the immediate and more distant future. At the same time, it ensures a growth in work productivity, improvement in quality of products, improvement in working conditions, and better use of stock.

Among the subjects relating to economical use of materials, the following deserve attention:

- fabrication of rollers by upsetting,

- pressing disk-type machine parts on a PXW-100A press. (In order to do cold-pressing, high quality materials are indispensable, and at present the materials being supplied to the factory are not of the best quality; until quality improves, we are making an effort to apply a semi-hot pressing method. This will undoubtedly bring poorer results, but there is no other alternative.)

- friction bonding,

- use of band saws (Rausch Company, Austria) in place of the circular saws being used thus far. (Because band saws are several times thicker than circular saws, we save a considerable amount of material. Last year over 6 tons of steel was saved. In addition, a drop of 1,100 hours a year in labor was achieved.)

- use of disk blanking in place of drilling operations. (This, too, saves a significant amount of material; the blanks are catalogued and designers use the catalogues in selecting stock.)

It is also well to remember that a commission was appointed in the factory whose task it is to decide what to do with irreparable scrap. The inspection

department is also required to draw up a list of such rejected elements. The design engineer determines their usefulness for specific parts, and the production engineer develops a technological process.

Automation and application of electronics in manufacturing methods have brought considerable results in the form of a reduction in labor-intensiveness and higher productivity. At this time there are 14 numerically controlled machine tools operating in the factory. They include: eight TZC 32Ni lathes, an HP-4 multi-purpose machine tool, a FYJ 40RN turret milling machine, a WFG 100N boring machine, and three WAB 25N drilling machines. These machine tools improve productivity due to their type of control and repeatability of dimensions. This year one more FYJ 40RN milling machine will be purchased.

To turn small parts, four Polish automatic lathes, types AD 45 and ATD 63, are being used. So that we do not have to rely on suppliers, connecting parts are made on these automatic lathes. At this time, rollers are turned on tracer lathes (Polish, Soviet and Swiss), but soon instead of two tracer lathes we will be using two numerically controlled lathes from the Andrychowska Machine Tool Plant. All of the numerically controlled machine tools and others operating in an automatic cycle are set up in a multi-machine system. Such a system allows for better use of a worker's time, for he services several machines at the same time. To grind tapers in spindles, very accurate and productive Voumard (Switzerland) grinding machines are used. These machines work on an automatic cycle; they ensure proper smoothness of surface and geometric form. Gear teeth are made on German, Soviet and Japanese (Okamoto) grinders.

One of the applications now underway is the cold rolling of threads on drive screws, instead of milling. This is an original method developed by workers at the Szczecin Technical Academy. Of course, threads are rolled in the factory on ATD automatics, but to be able to roll threads with such accuracy is an innovation.

The use of such a large number of numerically controlled machine tools requires suitable technical facilities to service these machines. It is planned, therefore, that new equipment will be purchased to develop and execute programs for numerically controlled tools. At a later time, a minicomputer will be installed which, together with the previously mentioned equipment, will form a computer station for design and production engineers.

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SCIENCE AND TECHNOLOGY

POLAND

NEW METALWORKING EQUIPMENT REPLACES IMPORTS

FS-4 Molding Machine from DOZAMET

Krakow PRZEGLAD ODLEWNICTWA in Polish No 4-5, Apr-May 85 pp 156-157

[Article by Zbigniew Rzadkowolski, manager of the Molding Machines Design Group in the DOZAMET Works in Nowa Sol: "The FS-4 Special-Purpose Molding Machine"]

[Excerpts] The known producer of piston rings, the FAPIT Piston Ring Factory in Lodz, which uses molding machines from the FRG and Japan, is now having great difficulties due to lack of spare parts for worn machines. Therefore, DOZAMET in a short time designed and made a special-purpose FS-4 molding machine exclusively from domestic materials and parts, which completely replaces the imported machines. The construction of the machine guarantees good-quality molds and makes it possible to service the machine safely, easily and conveniently.

The parameters of the FS-4 machine are the same as those of the imported machines, and in some cases are much higher. Performance tests conducted in the Piston Ring Factory demonstrated their complete suitability and high operating qualities. Effective sealing of mating parts, automatic lubrication and correctly selected materials provide durability and reliability. The FS-4 molding machine has been given a good grade by the user.

Technical Characteristics

Size of molding box in light	425 mm diam
Height of molding box	35 mm
Pressing stroke	120 mm
Separation stroke	8-30 mm
Pressing force	120 kN
Compressed air pressure	0.6-0.7 MPa
Control voltage	220 V
Consumption of compressed air per cycle	0.44 cu m
Level of noise emitted during operation	below curve N85
Weight	1,320 kg

Summary

1. The FS-4 special-purpose molding is a reliable and safe machine in service. The noise which it emits during operation does not exceed allowable norms. Several variants of molding technology may be applied. It ensures good pressing by a pattern plate from the bottom, guaranteeing that the mold will be made correctly with good distribution of thickening, diminishing as distance from pattern increases.
2. In addition, the FS-4 machine has:
 - infinitely variable adjustment of excess weight,
 - infinitely variable adjustment of speed and size of path of separation of mold from pattern,
 - automatic lubrication of all mating parts..
3. The machine is made entirely of domestic materials and parts.

Centrifugal Casting Machine from DOZAMET

Krakow PRZEGLAD ODLEWNICTWA in Polish No 4-5, Apr-May 85 pp 157-159

[Article by Ryszard Krystkowiak, design specialist, Molding Line Design Section in the Molding Techniques and Shop Equipment Workshop of the Factory Design Office of the Lower Silesian Metallurgical Works DOZAMET in Nowa Sol: "The UOO-8 Carousel Machine for the Centrifugal Casting of Bushings"]

[Excerpts] There are many design variations of machines for the centrifugal casting of bushings. For the most part, the plants themselves build the single units, adapting them to their own needs. However, in the case of mass production, the machines have thus far been imported from countries in the second payments area [capitalist countries].

In the PZL Mechanical Equipment Plant in Krotoszyn, which is the main producer of cylinder bushings for the automotive industry, carousel machines made by Gibson, an English firm, are used for the centrifugal casting of bushings. These machines are already quite worn and the control and drive parts used in them, which were made by seven different western companies, require many subassemblies which are not made in Poland but must be imported. Because of this, a prototype machine, UOO-8, for the centrifugal casting of bushings, was designed and made in the DOZAMET Lower Silesian Metallurgical Works in Nowa Sol and then installed in the PZL Mechanical Equipment Plant in Krotoszyn.

The eight-station machine, adapted to the technology used in the Krotoszyn plant, is highly automated. It was made almost entirely of Polish subassemblies, with the exception of some pneumatic cylinders which we do not produce, and worm gears in which Czechoslovakia specializes.

Performance Tests and Studies

Performance tests on the machine were successful. During the tests the UOO8 machine operated in a three-shift arrangement. Laboratory studies showed the castings to be of the correct structure, with no internal defects. The shift

of the inner diameter of the casting in relation to the outer diameter was 0 to 0.3 mm. When bushings were of approximately maximum size, 70 units per hour were produced. However, when bushing dimensions were closer to the minimum, 120 units per hour were produced. The minimum cycle achieved was 28 seconds. The temperature of the centrifuge spindle bearings during continuous operation was approximately 70 degrees C.

During performance tests a very serious problem appeared--the rings closing the chill mold "stuck." The difficulty was eliminated by cooling the rings and coating them with blacking, but this made it necessary to increase the work crew from two to three persons. In the machines now being produced the rings will be coated with blacking automatically.

Conclusions

The U00-8 machine for the centrifugal casting of cylinder bushings for the automotive industry achieved the planned engineering parameters and was turned over to the PZL Mechanical Equipment Plant in Krotoszym for operation.

Production of these machines eliminates import of this type of equipment from the capitalist countries, thus saving considerable foreign-exchange funds.

Technical Characteristics of the U00-8 Machine

Maximum productivity	120 units/ton
Dimensions of castings (bushings):	
Inner diameter	60-170 mm
Outer diameter, max	190 mm
Length of bushing, max	400 mm
Installed capacity	70 kW
Compressed air pressure	0.6-0.7 MPa
Compressed air requirements	0.55 cu m/cycle
Cooling water pressure	0.3-0.4 MPa

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SCIENCE AND TECHNOLOGY

POLAND

TASK FORCE DRAFTS STATUS REPORT ON COMPUTER AIDED DESIGN

Warsaw PRZEGLAD TECHNICZNY in Polish No 15, Aug 85 p 19

[Article by (A.W.): "Problems Rankling the Designers"]

[Text] The Industrial Plants Design and Modernization Section in Poznan decided that its activities would be directed mainly at inspiring designers to use new, progressive methods in their professional work, i.e., computer aided design. In conducting these activities since 1972, the Section gained experience and knowledge (mainly by organizing nationwide conferences) as to the needs of the design community and the conditions which would stimulate further activity. One of the motions passed at the last Fifth Conference on Computer Aided Design (CAD) pertaining to the preparation of a status report on information science, was the basis for the preparation of a new report by the Section which would describe the current status of CAD in Polish design centers.

In October 1984 a conference was organized whose purpose it was to bring about the preparation of such a report. It was attended by 47 representatives of computer centers involved primarily in CAD problems.

The conferees passed the following motions:

1. Dealing with equipment--to appoint a team which will prepare a list of computer equipment for use in teaching and engineering applications.
2. Dealing with training--to request the Ministry of Science, Higher Education and Technology to add a course on CAD (a minimum of 45-60 hours) to train systems users.
3. Dealing with information--to publish programs in a CAD Bulletin.
4. Dealing with copyright laws--to apply for official, legal copyright status on programs developed by programming teams.

The conferees agreed that it was necessary to appoint a special task force to prepare a status report on CAD and define the direction of the expansion of computer science in engineering design. Seven Area Teams were appointed: two in Poznan and one each in Gdansk, Warsaw, Bydgoszcz, Gliwice and Krakow.

These teams will prepare materials on their communities based on the motions passed at the Conference.

The following were elected chairmen and organizers of the Area Teams: Zygmunt Piotuch (Gdansk), Grzegorz Chylinski (Bydgoszcz), Wacław Przybyło (Kraków), Tadeusz Klimek (Gliwice), Zbigniew Czechowski (Warsaw), and Alina Cieslik (Poznań).

The second Area Team appointed in Poznań under the chairmanship of Andrzej J. Wachowiak, chairman of the Design Section, will prepare materials of a reports nature on the work of 26 computer centers. These materials will also be used in preparing the task force report.

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END